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THE EFFICACY OF THE REGULATIONS AIMED AT THE CREDIT RATING AGENCIES

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Herewith I declare that this thesis is based on my own work. All ideas, major views and data from different sources by other authors are used only with a reference to the source. The thesis has not been submitted for any degree or examination in any other university.

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INTRODUCTION

Credit Rating Agencies (CRA) have been issuing credit opinions on bonds for over 100 years. As of 2008, there are estimated to be about 150 domestic and international credit rating agencies throughout the world (Langohr and Langhor, p 384, 2008). "More than 745,000 securities from over 42,000 issuers, and representing at least \$30 trillion are rated..." (Ibid. page 23). Credit ratings are used by bond issuers, investors, and regulators all over the world as a measure of the likelihood of default. The ratings are relied upon by some for making investment decisions and for assessing risk, and by others to satisfy regulatory requirements. Over the years, they have become a ubiquitous statistic and presumably indispensable in the investment and trading of government, corporate, and structured finance bonds. Since so many market participants use the credit ratings, there is a tremendous potential for damage if the credit ratings are incorrect. Financial institutions and regulators have essentially outsourced their credit work to the CRAs and thus, have created tremendous systemic risk for the capital markets.

Because of the prominence of credit ratings in the capital markets, the CRAs wield tremendous power. They can affect a company's or a country's cost of capital by the credit rating that they assign. If credit ratings are properly performing their function, then a higher credit rating will generally lead to a lower cost of capital. If they are not properly performing their function they are masking the true risk of the securities.

The proper functioning of the CRAs is an important topic for financial regulators all over the world, because ultimately they are responsible for the safety of the financial system, and until now the regulators have relied on credit ratings from the CRAs as an important measure of credit risk. The quality and reliability of credit ratings is also a very important

topic for investors as some of them still continue to rely on the credit ratings for information. The topic of effectively controlling the CRAs, continues to be discussed by regulators, academics, and investors.

The most recent crisis shook the global economy to its very foundation. According to the IMF, “Including assets originated in other mature market economies, total write downs could reach \$4 trillion over the next two years, approximately two-thirds of which may be taken by banks” (World economic outlook 2009). The magnitude of this loss and the role of the CRAs makes the topic of CRA regulation and reform critical for the future stability of the global financial system.

Given the critical role and perhaps indispensable role of the Credit Rating Agencies (CRAs) in the capital markets, and given their recent spectacular failure, and other past failures, new regulations continue to be put in place to control and improve the CRA function. The goal of this thesis is to analyze whether or not the regulations and guidelines that have been implemented thus far are working to control the CRAs, and to prevent them from again damaging the financial markets. If the research shows that the regulations are not effective, then further work has to focus on why the regulations continue to fail, and what needs to be done to improve them, or change the framework in which the CRAs operate.

Following every crisis, new regulations are put into place, to try control the CRAs, and to establish a framework for them to properly perform their function. Nevertheless, the failures continue, and the CRAs continue to be at the center of financial controversy. In July 2010, the US Congress passed comprehensive financial reform, commonly known as the Dodd-Frank Act. Included in this legislation are new rules directed at the CRAs (An executive summary... 2010).

This research will focus on the efficacy of the following regulatory initiatives:

1. Code of Conduct adopted by IOSCO in 2004,
2. CRA Reform Act of 2006, and
3. Dodd-Frank regulations of 2010

It is difficult to directly prove that the regulations are or are not working to prevent another crisis, until the next crisis occurs. But, examining how the regulations are currently affecting CRA behavior, and how the courts are ruling, and on which regulations they are basing their decisions, provides insight into the efficacy of the new rules and guidelines. The approach of this thesis is to track the evolution of the regulatory efforts and to analyze how they are performing. The method used to prove this thesis is to examine the main guidelines and regulations that have been adopted since 2004-2010. Then to juxtapose against these regulations a documentation of the continuing failures of the CRAs, the continuing bad behavior of the CRAs, the inability of investors and the government to hold the CRAs liable for their errors.

Specific court cases are cited, analyst emails are cited, and specific instances of regulations being ineffective are noted as evidence to support this thesis. Finally, in the most recent 2013 set of lawsuits brought by the US Department of Justice and 16 States against one of the CRAs, none of the regulations that have been adopted to control the CRAs is being used as the basis for these cases.

Most of this research report is focused on the U.S.-based rating agencies, the U.S. bond markets, and the US regulatory framework. However, reference will be made to other countries as well. This is because many of the rated US bonds are owned all over the world, the US credit rating agencies also dominate the international bond markets, and the regulatory regimes are inter-connected. Also, there have been regulatory efforts in Europe as well to address the role and power of the CRAs, particularly as they affect banks and governments. New proposals continue to be put forth all the time, because of the complexity of the issues. A February 2013 cutoff was used for this research and for the references.

The research is organized as follows. First, in order to understand the problems presented by the CRAs and in order to analyze the actual and potential impact of the regulations and proposed solutions, it is necessary to examine the history of the rating agencies and how

they garnered such a pivotal role in the fixed income markets. It is necessary to understand what credit ratings are, and what they are not. It is important to examine how ratings are used and to analyze some of the politics and pressures surrounding the rating agencies.

The most important point in the rise in power of the CRAs was the incorporation of their use in regulations. This dramatically raised the role of the CRAs, placing them at the center of credit risk measurement. However, errors, fraud, conflicts of interest, the lack of transparency, and a misunderstanding, misuse and limitations of the credit ratings led the market place to grossly underestimate the credit risk of a large portion of the fixed income markets.

While the CRAs had made several great blunders in rating corporate debt, the most recent crisis came in the area of structured finance. New financial technology, known as securitization and certain credit derivatives greatly increased the risk in the market. Instead of the traditional model of bank lending, where a bank would make a loan and retain the credit risk, many banks and Wall Street firms made loans and mortgages that they never intended to hold, but rather, these loans were originated with the intention of selling them via securitization, and increasingly complex structures (The Rise ... 2012). This was known as the "originate to distribute" model (The Incentive of the Originate... 2008: 6; Cracks in the Foundation... 2009: 67).

In this business model there was a clear misalignment of incentives, the banks did not really care if the borrowers repaid their loans. Securities were created from the risky loans, and were rated by the credit rating agencies and sold to investors. The risk analysis was shifted from the banks to the credit rating agencies upon whom the investors relied. As it turned out the AAA ratings that were assigned were grossly inflated.

In addition to the central bank, and Wall Street, the government itself, through various tax policies (such as the tax deductibility of mortgage interest) encouraged home ownership. Large quasi-government agencies, such as FNMA and Freddie Mac, not only provided guarantees on their mortgages, they were among the largest purchasers of mortgage-backed securities, including those from the now, infamous sub-prime mortgage sector (Fannie, Freddie ... 2011). Moreover, government regulators of the financial institutions, both in the USA and around the world, contributed to the crisis as they gave favorable capital treatment to the banks for holding mortgages, or highly rated mortgage-backed securities.

The CRAs have been cited repeatedly as being associated with some of the most spectacular financial crises. The quality of their ratings has been questioned, as well as the CRA motivations in assigning the ratings. In the most recent financial crisis, that began in the United States in 2007, with sub-prime mortgages, and that spread throughout the world, there were many institutions and factors that played a role. But, almost all, who have studied the crisis, agree that, the CRAs were a major contributor or, at least, a principal facilitator of the crisis. And, that without them and the role they played the crisis could not have occurred (Report of the Financial... 2008).

Was this simply an unavoidable error in credit judgment? Or, did they knowingly contribute to the crisis by recklessly handing out AAA ratings, or worse, looking the other way? Was it greed and short-term profit maximization that led the rating agencies to lower their standards? Or, was it just a really bad set of model assumptions? The courts are still trying to figure this out. While acknowledging the poor job they did in rating many trillions of dollars of bonds before the crisis, the rating agencies claim that their ratings are just opinions, which are protected by the first amendment in the US constitution, which guarantees the right of freedom of speech. They claim that people should not have relied on their ratings for their investment decisions (Court Papers... 2012).

Naturally, this angers the public, investors, the regulators and government. Thus far, the rating agencies have largely escaped accountability and liability for their role. In the end, no matter whether it was per-meditated greed, or simply very poor credit judgment, the

marketplace needs to be protected from such financial collapses. So, regulators continue to try to create a framework to prevent the rating agencies from again facilitating such a crisis. But regulating and protecting society from fraud requires different solutions than regulating and protecting the capital markets from incompetence.

Following this background is a discussion of the theoretical basis for CRAs and the role of the CRAs. Questions such as, what should be their role and can they fulfill that role are presented. A short discussion of what ratings should be and what they should measure is presented. Some of the problems facing the CRAs are discussed next.

This is followed by a review of the most important research on CRA reform. Most of the research on CRAs has been written only in the last 10-12 years, following the collapse of the Enron Corporation in 2001. The failure of the CRAs to evaluate and highlight the credit risk in this case, and their failure in the 2007 financial crisis, has resulted in numerous scholarly papers on the issues surrounding the CRAs. Most of the research discusses the causes of the CRA failures such as: the conflicts of interest of the investor-pay business model, the power given to the CRAs by the regulators, and the oligopoly structure of this market. All agree that there needs to be improvement on the CRA framework. The proposals span the spectrum, from reducing the role of the CRAs as much as possible and letting the market participants do their own credit work, to increasing the regulation, liability, and disclosure. Two main streams of thought emerge from the research on ways to improve the CRAs. One is to eliminate the private CRAs, and the other is to do a better job at regulating the CRAs.

Professor Frank Partnoy, from the University of San Diego is the major proponent for eliminating the CRAs. His view is that the CRAs provide no value, and that their privileged position given to them by the government, was a major cause of the financial crisis. At the other end of research spectrum is the approach of Professor Coffee, of Columbia University, who views the CRAs as necessary and potentially useful but recommends enhancing the regulatory framework.

In the empirical section, following a discussion of how the rating agencies were so central to the financial collapse, the legal challenges against the rating agencies are reviewed. Then the regulations that have already been implemented are analyzed and compared to the solutions proposed by the academics in the theoretical section. The hypothesis of this thesis is that even the most recent set of regulations imposed by the Dodd-Frank Act, have still not had the desired effect of controlling the CRAs. Although it is not the main goal of this thesis, a discussion and analysis of possible solutions is presented, including some new ideas by the author. This master thesis adds to the current research by updating the analysis to reflect legal challenges to the CRAs in 2012 and early 2013, discussing some of the failures of the most recent regulations, as well as providing evidence of CRAs reverting to their old behavior.

1. CREDIT RATING AGENCIES BACKGROUND

1.1. The History of the Credit Rating Agencies

Although there are many CRAs, three firms dominate the market for international credit ratings. They are Moody's Investors Service (Moody's), Standard and Poor's Corporation (S&P), and Fitch Ratings (Fitch).

Table 1. Number of Outstanding Ratings (as of 2011) & analysts

Type	Moody's	S&P	Fitch
Corporate	30 439	45 400	14 427
Asset-backed	93 913	108 400	58 315
Government	814 087	948 300	217 198
Financial institutions	56 486	60 700	54 586
Insurance companies	3 953	7 800	4 010
Total	998 878	1 170 600	348 536
# of analysts & supervisors.			
2008	1 512	1 309	1 362
2011	1 252	1 416	1 096

*Source: (2012 Section 15E examinations summary report & company websites).

The next two largest rating agencies in the US by number of ratings are DBRS and Kroll, with 51,570 and 17,278 outstanding ratings, respectively (Summary report... 2012).

CRAs provide ratings on corporate bonds including industrial, financial, and utilities, on national government and local municipal bonds, and structured-finance bonds, also known as asset-backed securities. The latter include, residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), credit card, auto, and student loan-backed securities (SLABs), collateralized debt obligations (CDOs) and collateralized loan obligations (CLOs) .

How did the rating agencies grow from being a niche business in the research publishing, to playing such a central role, and contributing to the greatest financial collapse since the Great Depression? As the need for capital grew in the United States, the need for investment research grew. This created demand for credit ratings for bonds grew, as investors needed help in evaluating the credit quality of various issuers. But, the market crash in 1929 and the banking crisis in 1931 were major turning points in the role of the rating agencies. In 1931 as the Great Depression was unfolding, many banks failed as the value of the most risky bonds they were holding declined dramatically. This increased the need for independent credit analysis and risk assessment of bonds.

In their book on the credit rating agencies, Langohr and Langohr have an excellent table which describes the history of the growth of the CRA industry (Appendix 3). They describe 4 distinct phases. The first phase (1909-1943), they refer to as the "establishment phase". This is when the rating agencies were created. In the author's view, it was far more than this. It is the period which led to the rating agencies exalted status.

Partnoy, states that "it is possible to get a picture of the growth of credit rating based regulation over time by analyzing the increase in the number of published regulations and other related materials in each of several substantive areas.... the number of citations to NRSROs appearing in each of five LEXIS-NEXIS databases, for securities, pension, banking, real estate, and insurance regulation. The growth since the early 1970s and the sheer number of citations- more than 1,000 for securities alone- is striking." (The Siskel and Ebert... 1999). Also, see Ekins and Calabria (Regulation, market structure... 2012: 9-10).

In order to help prevent future bank failures, the regulator of the banks, the Office of the Comptroller of the Currency (OCC), set minimum capital requirements which were based on the risk of their investments (Office of the Comptroller of the currency homepage). This is the concept of risk-based capital (RBC), in which required capital for a financial institution is based on the risk of the assets that it owns. This is the cornerstone of the Basel Accords requirements. The OCC decreed that banks could not buy "speculative investment

securities" as determined by "recognized rating manuals" (White: 5). This meant that banks had to hold only investment grade bonds, as defined by the rating agencies. Suddenly, by regulation, the rating agencies became the gate keepers for bank risk. As stated by, White "The creditworthiness judgements of these third-party raters had attained the force of law" (*Ibid.*: 6)!

The next phase followed World War II and lasted until the 1970s. During this period, the US economy was on a sharp growth path, so there were relatively few defaults, as a result the rating agencies received very little attention. Rating agencies garner more attention, and perhaps demonstrate their value (or lack of value) during periods of economic stress. Since the economy was growing strongly, credit rating agency growth was slow (Sylla: 24).

The next regulatory turning point, which fueled demand and increased the importance of the ratings, occurred in the mid-1970s. This came about because of the failure of many brokerage houses. As a result the SEC, increased the capital requirements for broker-dealers. They used ratings to measure risk and leverage. In order to make sure that these ratings were from "qualified" organizations, in 1975 they created the term NRSRO (Capital requirements... 1997). An NRSRO is a "nationally recognized statistical rating organization" (Definition of Nationally... 2005).

S&P, Moody's and Fitch, were immediately granted this status. Currently, there are 9 NRSROs (Summary report... 2012: 6): A.M. Best Company, Inc., DBRS, Inc., Egan-Jones Ratings Company, Fitch, Inc, Japan Credit Rating Agency, Ltd., Kroll Bond Rating Agency, Inc., Moody's Investors Service, Inc. (Moody's), Morningstar Credit Ratings, LLC, and Standard & Poor's Ratings Services (S&P).

In Europe, ESMA (European Securities and Markets Authority) is responsible for regulating credit rating agencies. Currently there are 33 organizations are registered with ESMA for credit ratings. (<http://www.esma.europa.eu/page/Credit-Rating-Agencies>)

The rules to become an NRSRO were initially completely vague. Over time the SEC, created some criteria to judge whether an organization qualified for this status. These

included its position in the marketplace, its operations, financial resources, size and quality of the staff, its independence, its rating procedures, and internal controls. These "guidelines" were better, but still left a lot open to subjective judgment. There were further proposals by the SEC in 1997 to more specifically define the term NRSRO, as discussed later, these proposals were not adopted (Wikipedia website).

While a rating agency was not required to become an NRSRO, financial institutions had to use ratings from NRSROs, in order to get regulatory benefit. The broker dealers had to get ratings of their holdings from at least 2 NRSROs. So now the bank, and broker dealers were strongly incentivized by their regulators to use credit ratings. The NRSRO designation began to creep into other regulatory uses (Elkins, Calabria 2012: 9).

According to White, "in the 1970s, federal pension regulators pursued a similar strategy" of out-sourcing credit risk evaluation to the rating agencies. As a result, the pension funds themselves adopted the use of credit ratings in their investment guidelines. For example, CALPERS (the California Pension Retirement System), one of the largest state pension funds in the US, required (and still requires), investment grade ratings for their investments, as can be seen from their published guidelines: "Holdings in the investment grade corporate sector shall, at a minimum, be rated investment grade by a recognized credit rating agency (at least Baa3 by Moody's or BBB- by S&P or by Fitch Ratings). This sector includes both domestic and foreign U.S. dollar and hedged into U.S. dollars public utilities, transportation, industrials, and bank and finance companies." (California public... 2013).

Other examples of regulators requiring the use of credit ratings was the US Congress, as a part of its legislation in 1984, specified that certain mortgage securities needed to be rated at least AA, by at least one NRSRO to be eligible investments for banks (Report on the Role... 2003). In 1989 the Congress required the use of the NRSRO framework to define "investment grade" corporate bonds held by banks for purposes of the government insuring bank deposits. Insurance regulators also began to require NRSRO ratings for bonds held by insurance companies, and, as noted in the SEC January 2003 report, even some foreign jurisdictions began using the NRSRO designation.

The extensive regulatory use of credit ratings in the insurance industry is an important area, because of the large bond holdings of the US insurance industry. This is especially complicated in the USA, because insurance companies are regulated by the individual states, not the federal government.

One of the landmark events in the history of the credit rating agencies involved the Enron Corporation. Enron was a US energy company that was created in 1985 (Wikipedia website). The company was originally involved in natural gas pipelines, but grew rapidly as it became a major player in the trading of energy via futures contracts. By 1992, Enron had become the largest seller of natural gas in North America. To further increase its profits, Enron created complex special entities financed by debt. Enron's revenue grew from \$13 billion in 1996 to over \$100 billion in 2000. In 2001 it came to light that Enron engaged in massive fraud, using accounting schemes to hide real risk and losses. The company went bankrupt, some of its officers went to jail, and Arthur Anderson, one of the 5 largest accounting/audit firms in the US closed down. Until 4 days before Enron's bankruptcy filing, Moody's, S&P, and Fitch, rated Enron's debt investment grade.

In January 2002 the US Senate initiated an investigation into the failure of Enron and the role of the rating agencies. The Senate held hearings on March 20, 2002. The title of the hearings was , " Rating the Raters: Enron and the Credit Rating Agencies" (Rating the Raters... 2002). Their findings are summarized in a January 2003 report but the SEC. "The Staff Report concluded that, in the case of Enron, the credit rating agencies failed to use their legally-sanctioned power and access to the public's benefit, instead displaying a lack of diligence in their coverage and assessment of Enron" (Report on the Role... 2002: 18). The staff felt that the rating agencies did not question what they were told by Enron, but simply accepted the information they were given. Furthermore, the staff noted that because the rating agencies were not subject to regulation, there was no way to hold them accountable. Many people question why after this failure by the rating agencies, the market place continued to use the rating agencies (Hill 2009: 283-294). This same question is still being asked today following the recent financial collapse.

This Staff report led to recommendations for further controls, but the SEC was slow to act, and not able to produce new rules. This led to the US Congress adopting the CRA reform act of 2006. These regulations, along with other major legislative and regulatory efforts will be discussed in detail in a later section. But, what is clear directly in the language of this piece of legislation was the government re-affirmation of the importance of the credit ratings. On the front page of the legislation, "Congress finds that credit rating agencies are of national importance" (Public Law 109-291- Sept 29, 2006).

From 2002-2006, there was rapid growth in financial innovation particularly in structured finance and securitization. From a ratings perspective, structured finance is unique. The fundamentals of securitization later, but its special characteristics as well as the demand for AAA-rated debt led to very rapid growth of the rating agencies and culminated in the collapse of the financial markets.

The US experienced an incredible expansion of credit and publicly issued bonds from the 1980s onward. This obviously fueled the growth of the rating agency product. The non-government residential mortgage-backed securities (RMBS) market was a huge source of growth for the rating agencies. Not only was it large, but the securities that were created, became increasingly complex. So the rating agencies were in a perfect spot to evaluate them. Structured finance was applied to other areas as well: Asset-backed securities (Abs), Commercial-mortgage-backed securities (CMBS), Collateralized Debt Obligations (CDOs), Collateralized Loan Obligations (CLOs) , etc. Between September 2004 and October 2007, S&P rated \$2.8 trillion of RMBS and \$1.2 trillion of CDOs. Very little could be issued without the rating agencies (Appendix 2). So in every sense, the rating agencies became the gate keepers for credit evaluation.

As the number of ratings grew so did the rating agency staffs. In the beginning of the 1970s the credit rating agencies each had only a handful of analysts. But, as noted in table 1, each of the three leading agencies had over 1,000 analysts in 2009. Regulators have argued that the staff did not grow commensurately (in the same measure) to keep up with the volume. Moreover, the rating agencies focused their analysts on rating new issues, from

which they earned fees, and gave less attention to the surveillance of previously issued deals. This was one of the SEC criticisms of the rating agencies, and it remains a concern.

The incorporation of ratings into the capital markets by the regulators continued right through the most recent times. Basel II, and soon be Basel III, make ratings an important measure of risk for bank capital requirements (Credit Ratings... 2005; Dodd-Frank vs Basel III 2011; Basel III rules... 2011). The ECB requires investment grade ratings for their repo programs (European Central Bank homepage). And, even the Federal Reserve's TALF programs which were created as emergency measures during the height of the crisis, made credit ratings a requirement (Term Asset-Backed... 2010).

It is clear, then, that government regulators around the world raised the CRAs to a level of importance, which they could not have achieved on their own, and placed their ratings in the heart of the fixed income markets. Possibly, because of the importance that the regulators placed on the credit ratings, the private sector also made credit ratings a critical bench mark for trading and investing and to measure risk-adjusted performance.

1.2. Credit Ratings

Everyone agrees that credit ratings are a measure of credit risk, but beyond that there is no uniform definition of what they are, what they mean and what they should mean. In the theoretical section of this thesis, there is a discussion of what credit ratings should mean. In this section a quick description of the CRA definition of their own credit ratings is provided.

Each rating agency publishes how it defines its rating symbols. There are actually many types of ratings. There are long-term issuer ratings, ratings on short-term debt, point in time ratings, credit estimates, private ratings, and other special ratings products. For the purposes of this thesis, the long-term issuer ratings are used.

Standard & Poor's said in a recent report (Adelson, M. "The Role of Credit Ratings in the Financial System", page 5), that credit ratings are symbols that convey "forward-looking

opinions about a borrower's or a security's creditworthiness ". Moody's (Rating Symbols and Definitions 2013: 4) says that its ratings are "forward-looking opinions of the relative credit risks of financial obligations". Fitch says that, "ratings are relative measures of risk; ... opinions on relative ranking of vulnerability to default, do not imply or convey a specific statistical probability of default, notwithstanding the agency's published default histories that may be measured against ratings at the time of default. Credit ratings are opinions on relative credit quality and not a predictive measure of specific default probability" (Definitions of Ratings... 2013).

S&P and Fitch use the following symbols (Appendix 3). AAA is the highest ratings category, it is followed by, AA, A, BBB, BB, B, CCC, CC, C, D. Each symbol below AAA up to CCC, can have a + or - added, to add or detract from the credit quality implied by the letter symbol. BBB is lowest investment grade category. Anything below BBB, is considered speculative grade. Moody's has slightly different symbology. It has Aaa as the highest rating, followed by Aa, A, Baa, Ba, B, Caa, Ca, C. To differentiate within major rating categories, they append a #, 1, 2, or 3, with 1, being the highest. For example, Baa1, is just below A3.

On S&P's homepage they state that their ratings "are not intended as guarantees of credit quality or as exact measures of the probability that a particular debt issue will default. Instead, ratings express relative opinions of relative creditworthiness.." S&P emphasizes default risk, but may incorporate ultimate recovery. Moody's (Rating Symbols and Definitions 2012: 4) says that its ratings "reflect both the likelihood of default on contractually promised payments and the expected financial loss suffered in the event of default".

While to the novice, all this language seems similar, in fact each word is chosen by the rating agencies and their lawyers to mean certain things and exclude other things. And, their definitions are vague. For example, S&P says that AAA means, "Extremely strong capacity to meet financial commitments", whereas a security rated BBB means "Adequate capacity to meet financial commitments, but more subject to adverse economic conditions".

Even though most rating agencies consider their ratings as measuring relative risk, there is an element of absolute risk as well. For example, when S&P rates something AAA, in their view, this security should be able to survive what they define as a AAA stress environment. For S&P this is an environment akin to that which prevailed during the Great Depression.

How and when ratings change is also not so obvious. Ratings reflect a view about the future. Several years ago, S&P explicitly incorporated stability into its ratings. Within their framework, the higher the credit rating, the more stable it should be. This is related to the concept of rating through the business cycle. It is not always easy to decide if new information is just noise in the data or expected changes from the normal business cycle, and temporary or a permanent change to creditworthiness.

It is also very important to understand that credit ratings attempt to measure only credit risk. There are many other risks to securities, and in particular bonds, such as, interest rate and liquidity risk, which are not meant to be captured by the ratings. Ratings also say nothing about relative value. A bond could have very little credit risk, but be a very bad investment!!! Or, the reverse, a bond could have a very high risk of default, but be a very attractive investment, if it is priced very cheaply.

Another important issue is what information rating agencies use to arrive at their credit ratings. In the past they have been privy to non-public information. In fact, regulation FD gave them a special exemption (Reg FD was a rule preventing selective disclosure of information by an issuer). This special position, has added to their importance. This exemption was recently repealed. This is an issue which is discussed later (Regulation FD-SEC... 2010).

The rating process has several steps. Based on S&P rating process, an issuer approaches a rating agency for a credit rating (Figure 1). The initial discussion usually includes a description of the information that the rating agency will require, how confidential information will be treated, how long it will take to produce the rating, and a discussion of the fees. An engagement letter is signed, and the formal process begins. For corporations there will be the obvious financial information, but also information about the company's

business plans, competitive position, regulatory issues, etc. The company will also supply a draft of the security offering memorandum. There will usually be a request to meet with management. In many cases, the company may hire a rating advisor. This is often an investment bank. The investment bank is clearly, acting in this case as an advocate for the issuer. It helps present the information in the best possible light, so that the issuer can get the highest possible rating.

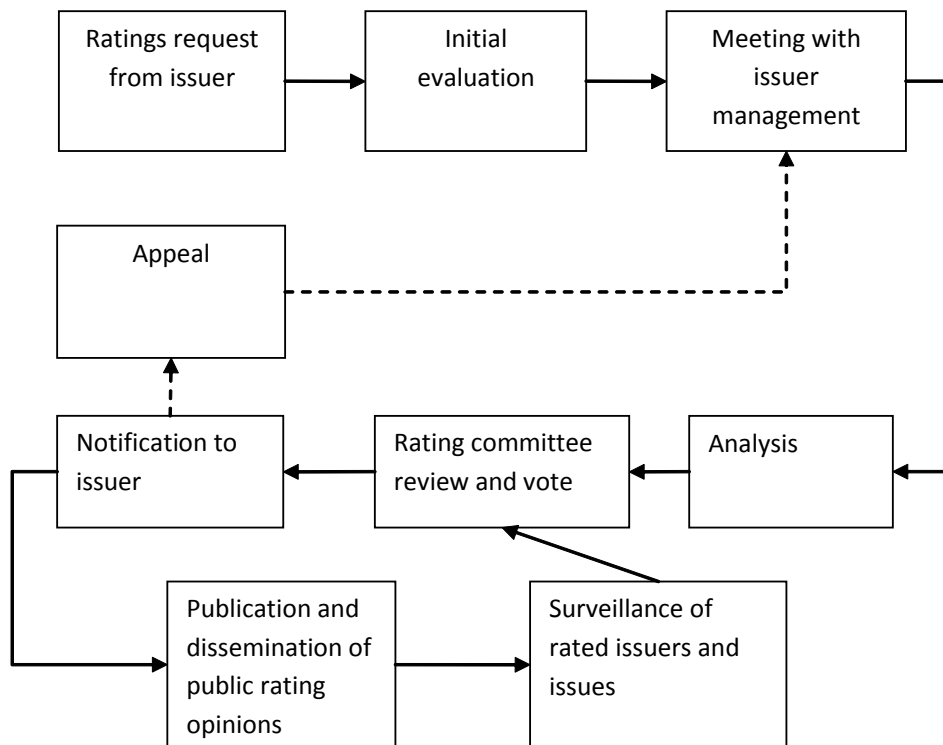


Figure 1. « S&P Ratings Process » (Source: Standard & Poor’s homepage)

As described by Moody’s, there will be a lead analyst assigned to the rating at the rating agency. The lead analyst will be a specialist in the industry. He/she will be responsible for assembling the information for presenting the rating proposal to a rating committee. The analyst will use the information that was gathered and the rating criteria that are in place (Moody’s homepage “How to get rated”).

The rating criteria are the central tenets of the rating agency and are meant to ensure consistency of the ratings between analysts and of the securities that are rated. However, rating agencies are free to choose whatever criteria and standards they would like. There was nothing in the law to prevent them from weakening criteria. And, researchers have found that this is precisely what happened (Rating Firms Inflated... 2013).

The rating committee is very important. It is here that the analysis is vetted. It's important to note that an individual analyst does not assign a rating. It is voted on in the committee. The rating is based on a majority vote. The committee is composed of analysts. While in theory, the composition of the committee should not matter, since the ratings should be based on the criteria, in fact, it can make a big difference. Some committees have analysts from non-USA offices, who view things differently, some committees may have surveillance analysts, some committees may have more junior analysts. The chairperson of the committee is supposed to control for this variation.

Very quickly following the vote, the issuer is informed of the decision. The issuer can review the draft release for factual information and to ensure that no confidential information (material information not in the prospectus) is being disclosed. The rating is then published for public consumption with a rating rationale making reference to public information and the rating criteria, which are always published. An issuer can decide to withdraw the rating request prior to publication. The rating agency can then issue an unsolicited rating, but this rarely happens (Moody's homepage "How to get rated).

Aside from the initial rating, ratings are generally subjected to surveillance. Because the rating is only based on information at a point in time. Investors would like to have up-to-date information in order to be able to manage their risk in the secondary market. And, issuers would like to know if their rating is changing, in case they need to raise more debt.

As discussed in the section on the history of the rating agencies, originally, credit ratings were really designed for the benefit of the investor. Until present times they still are supposed to serve this role. The initial rating is supposed to help the potential investor gauge the relative credit risk of a new security, and help the investor decide how much to

pay. In addition, most ratings, as already discussed, are meant to be monitored for changes in credit risk. This helps investors in the secondary market make buy and sell decisions.

The real market consists of many types of investors with different requirements and different levels of expertise. Large institutional money managers like PIMCO or Blackrock have large staffs with many research analysts to support their portfolio managers (Gross 2010). If all the relevant information and data were public, they would not need the rating agencies at all (this is a big "if", and is subject to controversy). In fact, the SEC has passed regulations increasing the amount of disclosure for securitized products in 2004, and has made new proposals for further disclosures (Understanding Regulation AB 2005; 144A Transactions... 2010; , SEC Proposes Substantial... 2010).

On the other hand, smaller investors, small money managers, treasurers, and retail investors, cannot afford to have research staff. They remain dependent on third party research/credit analysis, both for initial ratings and in the secondary market. Furthermore, many funds have minimum rating requirements, so, even if they are not relying on the reliability of the ratings they still need them.

As discussed later, the Dodd-Frank legislation attempts to lessen the reliance on ratings. The SEC recognizes that a necessary condition for this is that investors have the information and tools available to them to analyze securities. In their 667 page proposal for new regulations for ABS, published in April 2010, they noted that " investors and other participants in the securitization markets did not have the necessary tools to be able to fully understand the risk underlying those securities and did not value those securities properly or accurately" (Asset-backed securities 2010).

Issuers rely on ratings to get their bonds sold. They would like to borrow at the lowest possible rate. High ratings, from a credit agency that is respected by the market, can help the issuer sell debt at the lowest possible interest rate. For government and corporate issuers this is rather self-evident. In the case of structured finance, the issuer could be an entity trying to sell assets at an interest rate that is commensurate with a rating above its own, through structural/contractual forms of credit enhancement. Or, it could be an entity that

this trying to extract a profit through a credit arbitrage (the basic mechanics of securitization are discussed in section 1.5). In these situations the issuer, is looking to use the rating agencies' methodologies to achieve the least costly method of credit enhancement. In all cases, issuers have an incentive to pressure the rating agencies for higher ratings.

The regulators are also users of ratings. They use ratings as a way of monitoring the risk of the institutions they regulate. Bank regulators, insurance company regulators, and pension fund regulators have all used credit ratings in their evaluations. Another user of ratings are the creators of bond indices. These indices are used to benchmark performance in fixed income. Bond indices are often segmented by rating category so that risk adjusted returns can be analyzed and evaluated.

1.3. Credit Rating Agencies Business Model

Rating agencies have been very profitable, especially in recent times. In 2007, revenue from the top 3 rating agencies was \$4.9 billion with bond issuance at \$4.7 trillion (Deb & Murphy, page 2). While their revenues were down sharply to the \$3.7 billion on issuance of \$3.9 trillion following the crisis, they are nevertheless, substantial. The rating fees are probably lower, because rating agencies earn ancillary fees for other services. According to Frank Partnoy, S&P is paid 3 to 4 basis points of the size of the issue size for a corporate bond rating. Fees for rating structured finance bonds, are higher. They could be 10 bp for a typical CMBS transaction, or higher for more complex transactions (How and Why Credit Rating...2006).

It is important to understand the business model for the rating agencies and who pays for ratings, because, the choice of business model leads to the potential for conflict of interest. At least in theory, one might expect a rating agency to potentially be influenced in their rating assessment, by who pays for the rating. The two primary models are the subscriber/investor-pay model and the alternative, issuer-pay model. Originally, investors paid for credit ratings. In the early years, credit ratings were just a source of research. This

changed, for several reasons, to the issuer-pay model, which is prevalent today, although there are still several rating agencies that use the subscription-model.

Another reason why the business model is important, is its legal implications. Under the issuer-pay model, the rating agency does not have a business or contractual relationship with the investor, who may use the rating in their investment process. This fact helps the rating agencies protect themselves from investor legal challenges.

When investors paid for ratings (**investor/subscriber-pay model**), they would receive the research in printed form. The payments were essentially a subscription service (e.g. Moody's Bond Record). As technology to enable cheap copying and re-distribution, the rating agencies recognized the risk to their subscription-based business. This risk was known as the "free-rider" (Credit Rating Agencies... 2009: 2). The rating agencies were concerned that the ratings could simply be used by the market place without getting paid. The major rating agencies still generate some fees from subscriptions of their analysis and sales of their analytic products, but the bulk of their revenues comes from issuers.

Based on different CRA's website information, despite the fear of losing revenue due to free use of their research, there are several rating agencies who use the subscriber pay model, such as Egan-Jones, and Real Point. There are also non-NRSRO rating agencies such as Creditsights and Rapid Ratings that use the subscription model.

Aside from the issue of illegal re-distribution of their product, a primary reason for the move to the **issuer-pay model** was the recognition by the rating agencies that the government had essentially created an oligopoly structure with strong barriers to entry by requiring ratings from NRSROs. The rating agencies realized that they were indispensable to the issuers, and, therefore, they had much more pricing power with issuers than with investors. With only 3 NRSROs the market became a victim of oligopoly pricing. Actually, it was even worse. In most traditional oligopolies, market share is divided among the producers. In the market for credit ratings it is easily possible for several rating agencies to have market share in excess of 50%, because many issuers use ratings from more than one rating agency.

The big 3 rating agencies are issuer-pay (Credit Rating Agencies... 2009). Typically the issuer pays for the initial rating as well as a fee for surveillance of the rating. The rating agencies that use the issuer-pay model, claim that investors benefit, because the ratings are made available for "free" to everyone. Critics claim that this arrangement makes the rating agencies beholden to the issuers. There is truth to both sides of this argument, and it will be discussed later in this report. Many of the new regulations have been designed to control the possible conflict of interest that can arise from the issuer-pay business model.

While the fee schedules for corporate bonds are made public, the actual fee charged can be negotiated based on size and frequency of issuance. Fees for structured finance transactions are not published at all. These fees are more heavily negotiated. Based on discussions with market participants, it can be reported that fees can range from \$500,000 to \$1,000,000 per deal. Because of the potential for conflict of interest, fee discussions today are kept away from the analysts and are done by a separate group at the rating agency (Appendix 2).

Most of the ratings on sovereign bonds are done for free. The situation is that for big countries like USA, Germany, France, etc. receives no fee. It is interesting, that despite this, there is so much criticism of the rating agency sovereign ratings. There is obviously, no conflict of interest in this case, from the threat of an issuer to take its business to another agency. Instead, the pressure is political pressure. The country involved could try to disallow the rating agency from operating in its country, and even try to prosecute its analysts (Ambrose, E.-P. 2012; Reuters 2011). In contrast, for smaller countries like Estonia, South Africa they do get paid. When they are not paid, the rated is designated as "unsolicited" and must be listed this way. When they are paid, like for Estonia, the rating is listed as "solicited" (Standard & Poor's homepage, Sovereigns Rating List).

The claim in this case by investors is that the rating agencies were improperly downgrading Italian debt, and their negative reports were affecting Italian stock prices. This has been an ongoing complaint by European investors and regulators. They claim that the rating agencies, because they are US companies, are biased towards the US, and against the Europeans. One of the solutions that has been proposed is to create a European rating

agency. However, this effort has recently failed (Dearth of Investors... 2012; Conservative MEPs... 2013).

1.4. Securitization

This section is mostly based interview with David Jacob (Appendix 2).

1. The basics of securitization

While some may think of securitization as a recent financial innovation, it actually began in the early 1970s (Wikipedia website). Mortgages on homes were pooled together by US government sponsored entities. The mortgages were placed in trusts and bonds backed by the mortgages were sold into the market. Unlike, pfandbriefe (Deutsche Pfandbriefbank AG homepage), in Germany or covered bonds in Europe, these bonds are complete pass-through structures; i.e. all interest and principal from the underlying mortgages was passed through to the bond investor, and the mortgages, once pooled, had nothing to do with the originating bank. Since the underlying mortgages had US government guarantees, there was no credit risk, so there was rating agency involvement.

There are three US government mortgage agencies, Ginnie Mae (GNMA) (Ginnie Mae homepage, Platinum Securities), Fannie Mae (FNMA) (Fannie Mae homepage, Single-Family) and Freddie Mac (FHLMC) (Freddie Mac homepage, Mortgage Securities Products). While the exact description of their guarantees on their mortgages differ a bit, the market place and regulators viewed all their mortgage-backed securities as equivalent in credit quality as US Treasury bonds. Incidentally, the first GNMA pool that was created in 1970, which was backed by a pool of 30 year fixed rate mortgages paid investors every year for 30 years, until final maturity in 2000!

In the 1980s, non-government guaranteed residential mortgages began to be pooled and securitized; first, as pass-through securities, and then using multiple classes of bonds. Since there was credit risk, the bonds that were created needed to be rated. Since that time,

many other types of loans and income producing assets have been pooled, and turned into rated securities (Blundell- Wignall 2007: 30; The Role of Ratings... 2005: 5).

While the securitization market began with home mortgages, today it is possible to securitize credit cards, student loans, car loans, business loans, commercial mortgages, and even such esoteric assets as the cash flows from film libraries or patents. There were even securitizations that used bonds from other securitizations. These were known as CDOs (collateralized debt obligations), and CDOs- squared's! Innovative investment bankers have been able to create synthetic securitizations, where the underlying portfolio (the portfolio of loans sold into the SPV) consists of credit default swaps or other reference portfolios. The CDOs that were backed by junior classes of RMBS deals that had sub-prime loans as their underlying collateral were among the worst performers in the recent credit crisis.

The process of securitization involves several steps (What is Securitization? 2008). First, a company with loans or income producing assets, that they either originated or purchased, decides that for a number of possible reasons, to remove these assets from its balance sheet.

Next, this originator sells these assets to a "special purpose vehicle", SPV, which is set up with the sole purpose of purchasing these assets. The SPV pays for the assets by selling bonds into the market place. The investors receive principal and interest from these bonds. If there are losses on the underlying loans, these losses are allocated to the bond holder via a write-down in the principal amount.

Sometimes the *originator* of the loans may have lower credit quality than the loans. However securitization allows the rating on the bonds to get a higher rating than the rating of the issuer. This is possible since the risk of the bonds is based only on the ability of the loans or assets to pay the bondholders, not the originator's credit risk. The originator does not retain any legal interest in the assets. One of the key aspects of a securitization is that the SPV is considered "bankruptcy remote" (Langhor, H, Langhor, P. 2008: 33). This means that its assets will not become entangled in a future bankruptcy proceeding of the

originator, which would not be the case of the secured debt of an originator. The assets are now owned by the SPV (trust), and cannot be used by the originating bank as collateral.

Since the bonds are securities and can be easily traded, they are more liquid and so they can be issued with a lower yield or higher price than the loans. This results in a profit to the institution arranging the securitization.

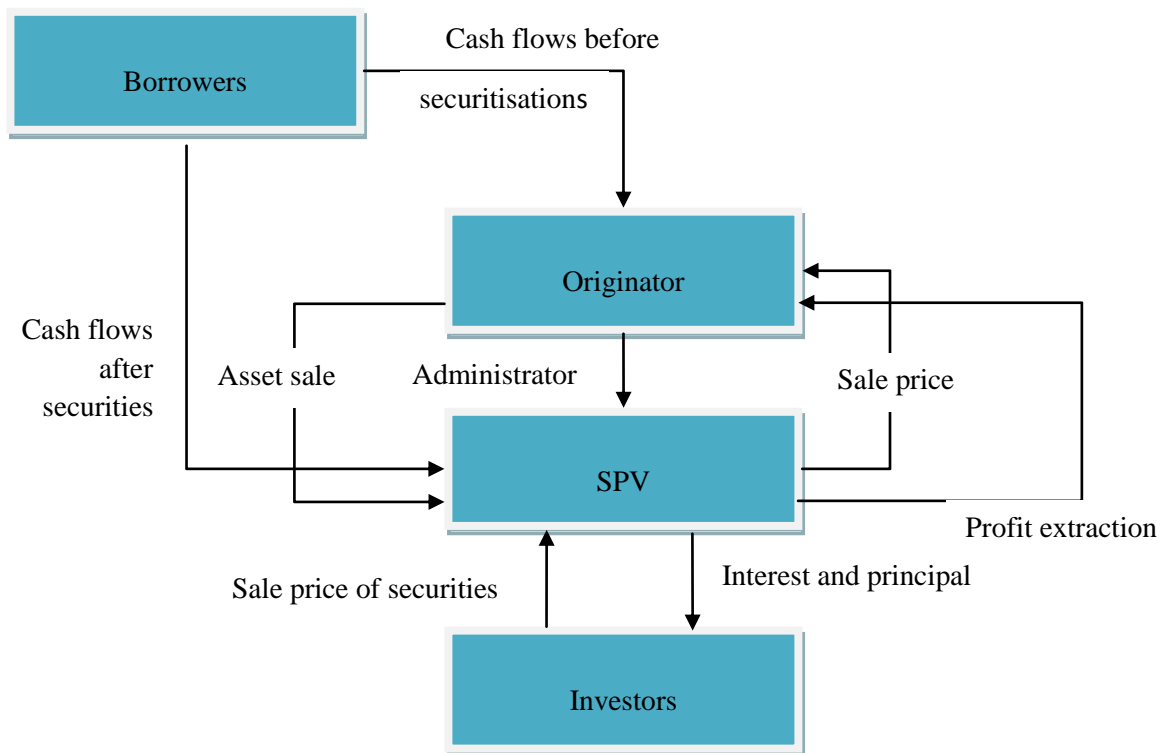


Figure 2. Diagram of securitization (Source: withfriendship website).

Looking at the Figure 2, the process begins with one or more loan **originators** who lends money (mortgage or loan) to many **borrowers** creating a portfolio or pool of loans. The originator is usually a bank. If there was no securitization the borrowers would simply repay the loan over time the originator. If the loans were securitized, the originator could by itself (or more usually through an investment bank) create a trust called an SPV, and sell the loans to the **SPV**. The SPV gets the money to pay the originator for the loans by selling bonds, which get rated by the credit rating agencies, to bond **investors**. The issuer or

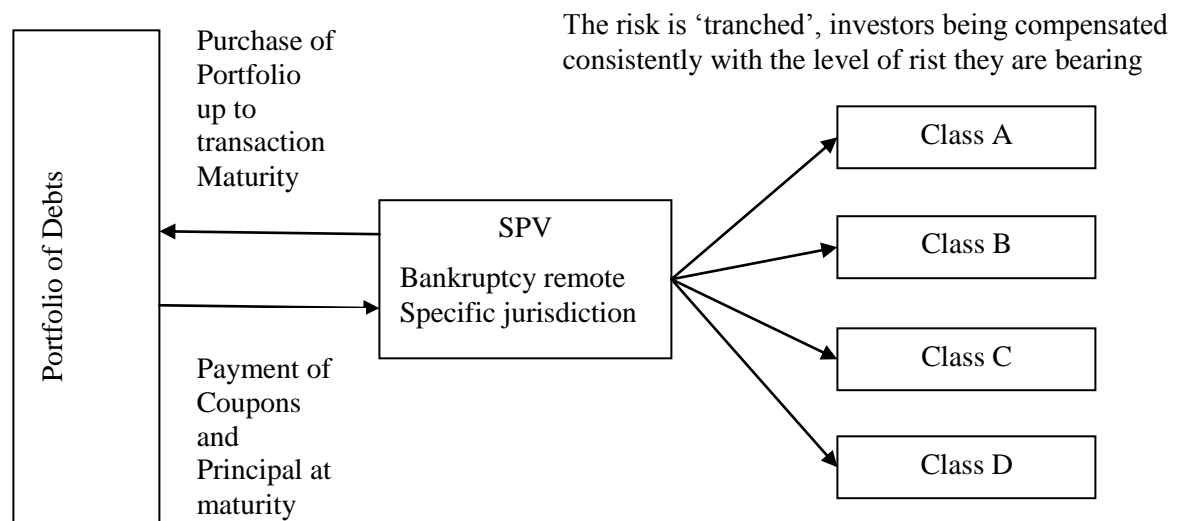
originator makes a profit by selling the bonds for more money than they paid for the loans. This is possible because the yield (the interest rate) on the rated bonds is lower than the interest rate on the loans. The bond investors receive interest and principal from the cash flow that the borrowers are now paying to the SPV instead of the originator.

In some cases, the assets or loans were originated with the intention from the outset to sell them immediately through a securitization. Once the assets are sold off, the originators are no longer responsible for their credit performance. Some researchers blame the financial crisis on the lack of alignment of incentives of this "originate to distribute model". For example, see European Central Bank, "The Incentive Structure of the 'Originate And Distribute Model" (The incentive structure... 2008).

New regulations in Europe and in certain instances in the USA require issuers to retain some of the risk. The idea with this is that the issuer will likely be more careful if they retained some of the risk (Dodd- Frank and Basel III's... 2012). This is known as having "skin in the game". As discussed in the theoretical section of this thesis, some analysts and researchers believe that to mitigate the conflicts of interest, CRAs should also be required to hold some of the risk (Regulators Propose... 2011).

Figure 2 is a very simple diagram. In reality, many classes/tranches of bonds are issued with ratings usually ranging from AAA to B. The lower the quality of the loans, the smaller amount of AAA bonds that can be issued because, a greater amount of subordinated bonds is needed to absorb expected losses on the loans. Generally, the credit quality of the loans that get securitized is medium to low. By issuing multiple bond classes via securitization it is possible for some of the bonds that are issued by the SPV to get a rating that is higher than the rating of the underlying loans. This is accomplished by using credit enhancement to raise the rating on the senior bonds. One way this is accomplished is by using what is known as a "senior-subordinated structure". In this structure, losses from defaults on loans in the pool are first allocated to the subordinated bonds. Since it is extremely unlikely that all the loans will suffer a 100% loss, it is possible to assign a higher rating to the senior bonds.

The higher the seniority, the higher the credit rating, as the lower classes are the first to absorb losses. The underlying loans pay principal and interest. These cash flows are used to pay the bond holders. Each month interest is paid to all bond tranches, and principal is usually paid in sequential order, by maturity and credit seniority. Losses are allocated bottom up, so that the most junior class has to be completely wiped out, before losses are allocated to the next highest class. So, the most senior class is protected, by the amount of the principal of the lower rated bonds.



- The SPV is a dedicated, bankruptcy-remote vehicle. It purchases assets from the originator via a True Sale
- All flows generated by the assets are used to repay what is owed under the securitization issuance

The risk bears on the credit quality of these flows rather than on that of the originator

Figure 3. Standard securitization structure (Source: Marjolin 2007, cited through Langhor, H., Langhor, P. 2008: 34).

The CRAs decide, based on the risk characteristics of the pool and their criteria, the amount of subordination that is necessary at each level to attain a particular rating. Since lower rated classes, need to be sold at higher yields, than higher rated classes, originators would like the rating agencies to require the smallest amount of subordination to achieve a given

rating. This would maximize their profit. Investors, on the other hand, would prefer the most protection possible, and so investors in the senior classes, would prefer large subordinated classes, which reduces the profit.

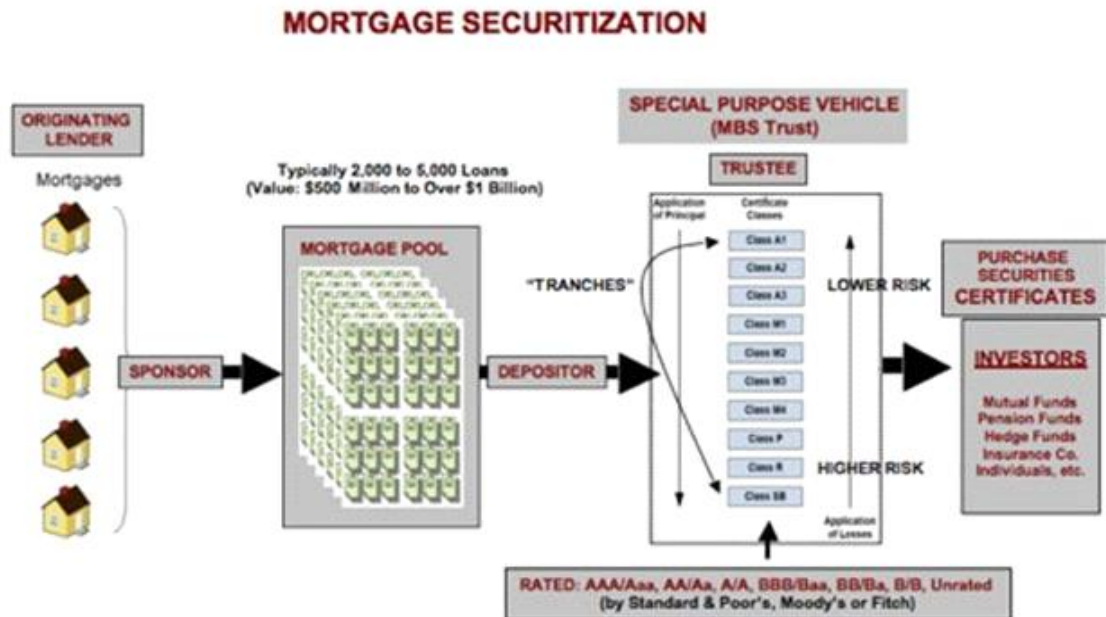


Figure 4. Mortgage securitization (Source : 1analysis website).

Many blame securitization for the crisis and advocate stopping securitization, however the reality is the market has been successful and a useful contribution to the capital markets (Thirty Years Later... 2002). Securitization continues to be used especially for credit card debt, auto loans, and student loans. Recently the Obama administration showed its support for using securitization to finance renewable energy contracts (Tracy, Sweet 2013).

Almost five years after the financial crisis there has been sizable resurgence of CMBS. In 2012, around \$50 billion of commercial mortgages were securitized. While this is far from the peak of over \$200 billion in 2006, it is a healthy increase from nearly zero in 2009 (Yoon 2013; Compendium of Statistics 2011; CMBS Report 2012: 4-5).

2. Benefits of securitization

Why do originators securitize their loans or assets? Securitization began as an alternative source of funding assets for financial institutions. In some cases securitization might be a cheaper source of funding than keeping the assets on the balance sheet. This became evident as regulators required less capital for assets that were rated AAA, thus artificially creating demand for AAA-rated RMBS.

Investors benefited by having access to a greater variety of bonds. Prior to the securitization of mortgages, investors could not really invest in the asset class. Only banks or insurance companies that made the loans directly could gain exposure to this large pool of assets. Securitization turned these loans into bonds. Investors got a choice of collateral and level of risk. From an investment diversification standpoint, this was a good thing, because the risk on mortgages had was not so correlated with corporate or sovereign credit risk. Credit card securitizations created a large class of well performing, relatively liquid bonds. And, CMBS, facilitated the financing of commercial real estate by its ability to securitize pools of small size commercial real estate loans that banks and insurance companies generally would not make.

Only 4 corporate bonds rated AAA (Bastow 2012). By being able to use securitization to structure sufficient credit enhancement, a large sector of AAA bonds, with higher yields than government bonds, became available for investors. “Unfortunately, the amount of credit enhancement was insufficient, and so the securities turned out not to perform like AAA’s” (Jacob, D.).

3. What makes structured finance different from other bonds?

There are a number of characteristics of structured finance bonds that make them very different from corporate bonds, which impacts their risk. First, the bonds that are being created are not direct obligations of a company or government. They are financing pools of loans. As a result, there is not the same motivation and concern of the issuer, about how the securities will perform. With a corporate bond, or a government bond, the issuer will need

to come back to the market to sell either equity or debt, so it is always concerned about its future finances.

In addition, in the case of corporate bonds, there is often publicly traded equities, which are traded continuously, and so there are many analysts besides the rating agencies that are following the companies. In structured finance there is no equity, there is no company that has earnings, so there is no motivation for issuers to worry about what happens after the bonds are sold to investors. There is no ongoing surveillance by equity investors in the company. There is no equivalent to observing stock prices. With government bonds there is always political pressure, and many analysts following the markets.

Second, there are relatively few issuers. Issuance is dominated by the large investment banks (Asset-Backed Alert homepage). This is important because the rating agencies are very scared to upset an issuer, because they could lose a large share of ratings business. So the investment banks have a lot of power. In corporate bonds, there are many issuers; the power is actually in the hands of the rating agencies. If a rating agency lost an engagement with a few issuers, it would have no meaningful effect on their profits. Similarly, with sovereign or government bonds, since the issuers don't pay for the ratings, rating agencies are not scared to assign a low rating or to downgrade these bonds.

Often, as was the case in the recent financial crisis, securitization was used solely for creating a profit for the arrangers. So, they had a very strong incentive to pressure the CRAs, to lower their standards so that smaller amounts of credit enhancement were needed.

Another characteristic of structured finance bonds is that they can get very complicated. Corporate bonds and government bonds are quite straightforward. The issuer agrees to pay the investor a specific rate of interest (or floating rate of interest), on a regular basis (usually semi-annually), and return the principal at maturity. The debt is senior to the equity, in corporate bonds. All earnings are used to pay the interest, before the equity holder can receive any money (What are Corporate Bonds... 2013). In government bonds, tax revenue supports the payment of interest (Wikipedia website, Government bond). In structured finance, pools of complicated underlying cash flowing assets, are used to pay

bonds. The credit quality of the cash flow may be relatively low, but through financial engineering, as described above, higher quality securities can get created. There are many model and legal assumptions that go into these structures. This creates a lot of room for error, and manipulation, and hiding of the risks.

The prospectus supplement for these transactions that is filed with the SEC is incredibly complex (Prospectus Supplement 2004). It describes the loan pool, and the payment terms of the bonds. For reference, a typical supplement for Bear Stearns RMBS deal is listed in the bibliography. It also lists the risks of the bonds, details about the origination process. It makes many references to the rating agencies. Typically an investor might only have a few hours to read and understand the deal and agree to buy bonds.

From a rating agency criteria perspective, credit ratings in structured finance rely more on quantitative and statistical analysis and models than ratings for corporate or sovereign bonds. As a result in a model, the mis-specification (intentional or as a result of an error) of a parameter could result in a whole sector being mis-rated. This is exactly what happened leading to the financial crisis. The assumption that home prices would not fall on a national level, and an assumption low asset default correlations, led to the mis-ratings in RMBS and CDOs.

Corporate and municipal bonds have long credit histories. For many structured finance products there is a relatively short history. For example, while sub-prime mortgages were around, prior to the crisis, they were a very small sector, and they were designed for homeowners, who just were not prime borrowers. The market that developed with the help of securitization was based on very risky and sometimes fraudulent lending practices. There was no history of credit performance for these kinds of loans.

4. Rating process for structured finance.

While many elements of the rating process are similar across asset classes, structured finance has some unique characteristics (Report to Congress... 2012). For example, the data needed for a rating in corporate bonds or municipal bonds, comes from the issuer.

Much of the key financial data is audited and publicly available. In the case of structured finance, in some cases there is no historical performance data, because the loans are newly originated, so all that can be obtained are the terms of the loans and some information on the borrowers. Often this is given to the rating agency on an aggregated basis. Moreover, the data is not audited and does not come from the issuer, but is passed through to the rating agency by the issuer from the originators. Many of the originators are small mortgage brokers or bankers. Many of them go out of business, so they take on little responsibility for the data. The role for the data reporting is usually given to another party, called a servicer, who takes on the responsibility for a fee, for servicing the loans. So the flow of data necessary for the initial rating and surveillance is very different in structured finance.

2. THEORETICAL CONSIDERATIONS IN CRA REFORM

2.1. Role of the Credit Rating Agencies in the Capital Markets

There is a difference what the role of a CRA *is*, versus what various analysts and researchers think the role should be. In this section both are discussed.

1) Certification role

Researchers often discuss this in the context of the certification role, informational role, and monitoring role. The certification role, as discussed previously, is to satisfy a regulatory or investment guideline requirement. If there were no such ratings-based requirement, there would be no need for the certification role. In this case the regulators would have to do their credit work and assessment. Even without CRAs the regulators would need an analytic framework to assess risk of the securities owned by the institutions they regulate. Credit ratings, have been able to provide a simple way for regulators of financial institutions to assess credit risk and determine capital requirements. The government does not currently have the capacity or resources to do this analysis itself. So the rating agencies have filled this gap.

2) Informational Role

A borrower always has more information than lender about his ability and willingness to repay a loan. Banks and other financial institutions have large lending departments that generally do the credit work necessary to determine whether or not they will lend money to a borrower. Loans are not securities. As such, they generally do not get rated by the rating agencies, if they remain on the balance sheets of the originating financial institution.

In the market for securities- the bond market- investors will use different means to try to gather information to assess the credit risk of a potential fixed income investment. There are public filings of financial statements, there are investor conferences, and road shows, and there are fixed income analysts at the investment banks and large institutional investors. But, the bond market is very large and diverse, with many issuers. "The credit rating agencies (arguably) help pierce the fog of asymmetric information by offering judgements- they prefer the word 'opinions'- about the credit quality of bonds..." (White 2012: page 3).

Investors worldwide have come to rely on credit ratings to varying degrees in their investment process. The largest bond investors, such as Blackrock or PIMCO, rely less on the ratings, as they have their own large research staffs (Gross 2010: 3). On the other hand, smaller money managers rely more heavily on the rating agencies. In any case, no money manager has the research coverage of the rating agencies. Moreover, with a new issue, especially in structured finance, where each transaction has its own unique risks, often an investor does not have the time, even if they have the expertise, to evaluate the risks (Appendix 2). Usually these transactions have a very short marketing period. Therefore, the portfolio managers rely to a large extent on the credit rating agencies.

Naturally the question arises, is it necessary to have CRAs to aid investors with the problem they face with asymmetric information? If all information that is necessary to make a lending decision were publicly available, then, at least theoretically, investors with proper resources could analyze the risks themselves. But there are several implications of this. First, without the CRAs, smaller investors would not be able buy some securities, since they would be able to analyze their risks. This would imply a shrinkage in available capital and lending capacity. Moreover, the reality is that issuers are reluctant to share some information in the public domain, because of competitors. So, if there were no CRAs who could serve as an intermediary, and evaluate risks using confidential information, once again the implication would be less lending and borrowing.

Another implication would be the increase cost on the capital markets of each investor having to perform all their own credit work. If there were CRAs that could be relied upon, there would be a savings of the cost duplicate efforts by each investor and regulator.

Credit ratings also facilitate trading in the secondary market. The rating grades that are assigned are used together with yield or spread, to enable quick and concise communication between potential buyers or sellers. The ratings can provide a common language. The ratings enable investors to compare different bonds with similar credit characteristics. Once again without the common language of credit ratings, secondary trading might be hindered.

They are also useful for ex post, performance measurement of bond portfolios. Investors are interested in analyzing their return adjusted for the risk they have taken. So serving investors needs for credit analysis is one of the primary roles of the CRAs.

The mission statements of the rating agencies embody some of these goals. For example, Standard & Poor's says, "With offices in 23 countries and a history that dates back more than 150 years, Standard & Poor's is known to investors worldwide as a leader of financial-market intelligence. Today Standard & Poor's strives to provide investors who want to make better informed investment decisions with market intelligence in the form of credit ratings, indices, investment research and risk evaluations and solutions".

The informational role that CRAs could serve is certainly useful. However, to think that the CRAs actually serve the informational needs of investors and regulators is a naive and idealistic view of the role of the rating agencies. It is perhaps what investors and regulators would like their role to be. A more cynical description, and probably more accurate description of their role is that they present the risks of a security to the investor on behalf of the issuer who pays them. And, therefore, might be subject to tremendous conflicts of interest.

Even though many view credit ratings as having little informational value (Partnoy), most attribute a great deal of power to the rating agencies. In Friedman (2005) rating agencies stand out in their impact on market valuation, through their rating decisions (A primer on

rating... 2007). In particular, downgrade decisions are sometimes seen as “verdicts” that exert a profound influence on a firm’s refinancing costs. In the aftermath of the Enron debacle, Joe Lieberman, then Chairman of the US Senate Committee on Governmental Affairs stated on March 20, 2002: “Someone once said that raters hold “almost biblical authority”. On a NewsHour with Jim Lehrer program in 1996, New York Times columnist Tom Friedman went so far as to say - “there are two superpowers in the world... the United States and Moody’s Bond Rating Service... and believe me, it’s not clear sometimes who is more powerful”. For some observers, therefore, rating agencies are perceived as being opaque, oligopolistic, and powerful (Rating the raters... 2002).

It is important to note the distinction between actually providing useful new information to the market and the market’s reaction to a change in a credit rating. First, since credit ratings continue to be used by regulators and in investment guidelines, it should not be surprising if there is a market reaction to changes in credit ratings. It is not proof that the CRAs are adding any new information.

3) Monitoring role

Even if CRAs cannot generate new meaningful analysis, they can potentially serve as watchdogs for the market place of changes in risk. A portfolio manager might hold hundreds of different bonds. The risks on these portfolios change all the time. The CRAs could serve as one warning indicator when something changes that could affect a bond. The role does not have to be one of certification, but rather simply a helpful tool for investors and even regulators. In this role CRAs would not be paid by issuers, but by investors. There would be no conflict of interest, as with the issuer-pay model, but the free-riding problem discussed in section 1.3, would exist and hurt the profitability of CRAs.

2.2 The Meaning of Credit Ratings

Credit ratings are supposed to be a measure of the credit risk of a bond. Understanding and correctly describing what exactly credit ratings are is important, because without this, it would be impossible to assess whether or not the credit ratings are serving their purpose in measuring credit risk. And, it would be impossible to penalize CRAs for poor performance, if their performance could not be properly measured. The more vague the definition of credit ratings, the more difficult it will be to hold them accountable for poor performance. Of course, they could still be held accountable for conspiring with issuers to inflate ratings. Since credit ratings are advertised as measures of credit risk or credit worthiness, a short discussion on credit risk is presented in this section.

Investors and regulators often differ on what the credit ratings mean. And, indeed, as discussed below, the CRAs themselves differ in their definitions of credit ratings. Some of the questions that confuse users of credit ratings are:

- a) do ratings measure probability of default?
- b) do they consider expected loss?
- c) are they relative measures, or absolute?
- d) are they comparable across assets and asset classes?
- e) when do they change and how do they change?

The concepts of pricing risky debt have been analyzed for many years, and have been discussed extensively in the academic literature, beginning with the seminal article by Robert Merton, in 1973, “On the Pricing of Risky Corporate Debt” (Merton 1973). In that article Merton uses option pricing techniques to value default risk. Interestingly an analytic service owned by Moody’s uses a model based on this approach, even though it is not used for credit ratings (Modeling Default Risk 2003).

While a full theoretical discussion on measuring credit risk is beyond the scope of this thesis, the major issues are reviewed. What market participants may want credit ratings to mean and what the CRAs say they mean are not exactly the same.

It is also very important to understand that credit ratings attempt to measure only credit risk. There are many other risks to securities, and in particular bonds, such as, interest rate and liquidity risk, which are not meant to be captured by the ratings. Ratings also say nothing about relative value. A bond could have very little credit risk, but be a very bad investment! Or, the reverse, a bond could have a very high risk of default, but be a very attractive investment, if it is priced very cheaply.

The concept of credit risk is elusive. Bonds have many risks, including interest rate risk, liquidity risk, and credit risk. Speaking mathematically, risk is a measure of uncertainty that is expressed by some statistical measure of deviation from an expected (mean) outcome, such as standard deviation (Appendix 2). A bond investor is promised interest payments and principal repayment and fixed points of time in the future. The extent to which this does not happen, represents risk to the investor. Credit risk, is the risk that the promised payments do not occur, due to the borrower's inability or unwillingness to pay. There could be other reasons why the actual payment stream varies from the expected payment stream. For example, a bond could be callable or subject to other contractual provisions.

One measure of credit risk is the likelihood or probability of default. In order to use this measure, however, one needs to have a definition of default. The Oxford dictionary defines "default" as the "failure to fulfill an obligation". Under this definition, if a borrower fails to make an interest or principal payment this is a default. This sounds very clear. However, in the context of bonds in the real world, this can be much more complicated. For example, if prior to missing a payment, a lender and borrower renegotiate the terms of the debt, was the bond in default? This issue was at the center of the recent crisis in Greece. In that situation, the question became very important for holders of Greek credit default swaps (Irwin 2011).

Credit default swaps are essentially insurance against default. In the Greek situation, Greek bondholders were being asked to "voluntarily" agree to reduced payments. If the agreement was deemed voluntary then the sellers of the credit default swaps (by their contractual

definition as determined by ISDA—International Swaps and Derivatives Association), would not have to pay the buyers.

Another difficulty that occurs sometimes in defining default, is the complexity of the obligation. In structured finance, in particular, the obligations of the issuer can be quite vague. For example, there is the concept of “available funds caps”. In this structure a bondholder in a securitization only receives the promised payments if the underlying loans pay a sufficient amount. In the glossary of terms published by the Commercial Mortgage Securitization Association (CMSA), an “available funds cap” is defined as “a limit on the amount of interest payable to certificate holders, to the extent of interest accrued on a group or pool of mortgage loans” (Glossary of Terms... 2006: 8). Under this condition the question could be asked, is a default even possible? Some would refer to this as an “illusory promise”

There are a number of ways to define risk. One is on a relative basis. Under this measure, the risk of one security is only defined relative to the risk of another security. Of course, such a measure does not tell an investor how much more risky one security is versus another. Still even relative measures to be useful need some more specificity. For example, if security B is more risky than security A, and security D is more risky than security C, there is nothing that can be said about the relationship between security A and security C. So any system of relative measurement has to place each security into a risk bucket. This is the essence of the letter grading assigned by the CRAs.

Absolute measurement of risk assigns a specific quantitative measure to each security. This could be a probability of default, a probability of loss, etc. Under this regime, a security with a higher probability of default, would be more risky than a security with lower a probability of default. A statistic which measures relative risk, is generally less prone to error than one that measures absolute risk, although each measure has its advantages and disadvantages. Many researchers study the pros and cons of absolute versus relative measures of risk in many different fields (Bialik 2012).

Since a bond, unlike a stock, can never give rise to cash flows greater than promised, credit risk can be thought of as the probability of the cash flows falling short of the promised payments. Under this measure, a bond is more risky, the greater the probability of falling short of its promised payments. But, it can be quickly observed that this measure fails in a number of ways. As said Jacob, D., firstly, it does not take into account the amount of the shortfall. Obviously an investor would care greatly if one security had a greater loss than another. Second, it ignores the timing of the shortfall. Due to the time value of money, losses occurring earlier are worse than losses occurring later. Thus, under this measure, the value of the loss given default is ignored.

In order to make a proper investment decision, an investor would need to know the probability of default, the timing of that default, and loss given default. Credit ratings from the CRAs do not provide this measure.

Despite the definitions that are publicly available on the CRAs websites, market participants still have different views on what the ratings mean, and what they should mean. Even though, as discussed, the regulators required the use of ratings, they also never set any standard definition for ratings. Even as recently as this year, the SEC, after studying the issued, decided not to set any standard. They accepted the view held by some that the independence of the rating agencies is paramount (Report to Congress... 2012).

Ratings are a product where it is impossible to really assess their quality at the time they are created. This is an important problem, because a mistake in a model used to create a credit rating may not be recognized until many years later.

Credit ratings can change for a number of reasons. They can change because the risk changes. Or, they can change because the CRA changes its criteria. One of the criticisms of the CRAs is that they do not (and some believe, cannot) change their credit ratings quickly enough to reflect the changing risk in the market. The changes are made by the surveillance unit within the CRA. CRAs claim that they monitor their ratings, but also they assert that their ratings are meant to “rate through the cycle” (Rating Thruugh-the-Cycle... 2013).

The idea here is that they specifically do not change their ratings for every change in risk in the market, but rather attempt to determine whether or not the change in credit risk is permanent. This necessarily means that there are times when the ratings do not reflect the current risk. The CRAs claim that investors want stable credit ratings. It is impossible to have both stable credit ratings and accurate ratings. Many believe that this gives the CRAs an excuse for poor performance in monitoring and updating their ratings (Deventer 2009).

CRAs generally place credit ratings on “credit watch” and issue a “credit outlook” before they actually make the credit rating change. These credit watches are meant to be more timely (Fitch Ratings homepage).

The other way a credit rating can change is when a CRA changes its criteria. The IOSCO code requires that changes in criteria be applied to new ratings as well as existing ratings. Therefore, a change in criteria can lead to changes in credit ratings of many outstanding bonds. This creates a discontinuity in the credit rating. It is an instantaneous change in the credit assessment. This can, of course, create problems for an investor. Usually, the CRA send out some type of notice that they are considering a change in criteria. They might also send out a paper with some of their ideas, and ask for public comments. In any case, changes in criteria are solely in the hands of the CRA, and thus, they are not tied to any objective standard.

Thus far, the possible meanings of credit ratings have been discussed. In reality, each rating agency publishes how it defines its rating symbols. There are actually many types of ratings. For the purposes of this thesis, the long-term issuer ratings are used. There are also ratings on short-term debt, point in time ratings, credit estimates, and other special ratings products.

Standard & Poor's said in a recent report (Adelson, M. "The Role of Credit Ratings in the Financial System", page 5), that credit ratings are symbols that convey "forward-looking opinions about a borrower's or a security's creditworthiness". Moody's (Rating Symbols and Definitions: 4) says that its ratings are "forward-looking opinions of the relative credit risks of financial obligations". Fitch says that, "ratings are relative measures of risk; ...

opinions on relative ranking of vulnerability to default, do not imply or convey a specific statistical probability of default, notwithstanding the agency's published default histories that may be measured against ratings at the time of default. Credit ratings are opinions on relative credit quality and not a predictive measure of specific default probability" (Definitions of Ratings... 2013).

S&P and Fitch use the following symbols (Appendix 3). AAA is the highest ratings category, it is followed by, AA, A, BBB, BB, B, CCC, CC, C, D. Each symbol below AAA up to CCC, can have a + or - added, to add or detract from the credit quality implied by the letter symbol. BBB is lowest investment grade category. Anything below BBB, is considered speculative grade. Moody's has slightly different symbology. It has Aaa as the highest rating, followed by Aa, A, Baa, Ba, B, Caa, Ca, C. To differentiate within major rating categories, they append a #, 1, 2, or 3, with 1, being the highest. For example, Baa1, is just below A3.

At S&P homepage (S&P credit rating definition and FAQ's) states that its ratings "are not intended as guarantees of credit quality or as exact measures of the probability that a particular debt issue will default. Instead, ratings express relative opinions of creditworthiness... ." S&P emphasizes default risk, but may incorporate ultimate recovery. Moody's (Rating Symbols and Definitions: 4) says that its ratings "reflect both the likelihood of default on contractually promised payments and the expected financial loss suffered in the event of default".

While to the novice, all this language seems similar, in fact each word is chosen by the rating agencies and their lawyers to mean certain things and exclude other things as will be discussed in a later section. Ratings are a product where it is impossible to really assess their quality at the time they are created. And, their definitions are vague. As a result (as discussed in more detail in later sections), to date, there have been no successful litigations against the credit rating agencies (McKenna 2012).

Even though most rating agencies consider their ratings as measuring relative risk, there is an element of absolute risk as well. For example, when S&P rates something AAA, in their

view, this security should be able to survive what they define as a AAA stress environment. For S&P this is an environment akin to that which prevailed during the Great Depression.

2.3 Conflicts & Problems faced by the Credit Rating Agencies

There have been many assertions that the rating agencies are very slow to change their ratings. However, at the same time, many governments claim that rating agencies are too quick to downgrade. Moreover, if the marketplace relies on the ratings, then rating changes themselves can cause further changes in the issuers financial situation. Downgrades can lead to increases in the cost of capital making borrowing more expensive. This could cause further deterioration in a country's or company's financial condition. (Note that this is not an issue in structured finance.) The impact of a downgrade is one of the biggest conundrums of the credit rating. This is known as the problem of pro-cyclicality. On the one hand, it is important for a CRA to issue correct credit ratings. On the other hand, the issuance of the credit rating can make the situation worse (Manso 2011).

Since the regulators do not set any standards for the ratings criteria, they view ratings from different rating agencies as equally valid, and therefore, substitutable. The problem with this is that this incorrect view is often adopted by investors. Another problem is that the output of the CRAs, namely their ratings will like not be comparable. This problem is a central to the issues of whether a credit rating is just an opinion, or something more. If any NRSRO can make up its own criteria, then how can they ever be wrong?

This can lead to issuer "rating shopping". This occurs when the issuer chooses the rating agency that has the weakest criteria to achieve a desired rating. As discussed in the analysis section, there have been several regulatory initiatives to try to limit rating shopping. These efforts, have thus far, failed. Even worse the rating shopping, is "rating catering". This occurs when the rating agency weakens its criteria in order to be hired to rate an issuer's debt (Rating Shopping or Catering?... 2012).

As discussed below, in section 2.4 many claim that the issuer-pay model is the most important conflict faced by CRAs and is the primary cause of inflated credit ratings and the

cause of the sub-prime crisis. It is obvious that a conflict exists when an organization is issuing an analysis that is paid for by the company that it is analyzing. The question is can this conflict be managed and regulated. This set-up is not unique to CRAs. Auditing firms are in exactly the same position. And, stock analysts are in a similar position.

Some claim that the investor-pay model limits conflict of interest, by removing the potential for pressure from issuers for higher ratings. But, the critics of this model maintain that it has its own conflicts. They claim that investors who own bonds and are subscribers, might pressure rating agencies not to downgrade a bond. Or, perhaps, if they are purchasing bonds, they might want a lower rating, in order to buy the bond at a lower price. These conflicts and the proposed regulatory and potential solutions are discussed later in this report.

In our modern capital markets, bonds are sold and traded all over the world. Different countries have their own regulations. While it may not be a theoretical problem, CRAs are under tremendous pressure to satisfy regulators around the world. Sometimes regulators can define things differently and cause a problem for CRAs.

Changes to criteria often take a long time. This can create a tremendous conflict for a CRA. The CRA can only rate using existing published criteria, yet there could be a time period when it knows that criteria will likely change and lead to downgrades. If it rates a bond according to its current criteria that bond could be immediately downgraded upon the change in criteria. Understandably, this angers investors and regulators.

Some researchers (Freytag, A., Zenker, M. 2012), maintain that the source of the problems with the CRAs can be explained by the principal-agent problem. The problem with this view is that the relationships between the users of the ratings and the CRAs is more complex than a straightforward principal-agent model. The CRA has a relationship with issuers, regulators, and investors.

1) The Issuer-CRA relationship

The relationship between the issuer and CRA is the most obvious. Issuers hire NRSROs to rate their new bonds.

“An example of how the principal-agent problem occurs between ratings agencies and the company's (the principal) that hire them to set a credit rating. Because a low rating will increase the cost of borrowing for the company, it has an incentive to structure its compensation of the rating agency so that the agency gives a higher rating than what may be deserved. The rating agency is less likely to be objective because it fears losing future business by being too strict” (Principal-Agent Problem).

Although they are not part of the selling group as the investment bankers are, the CRAs act as an agent for the issuer, by enabling the issuer to sell its bonds to the market place. And, so in this context its duty is to the issuer who hires them. As a result, the CRA is less concerned about the surveillance of outstanding ratings or even the performance of their ratings. Their primary concern is on the initial rating. Their concern about the rating performance is limited to the effect on its reputation with issuers.

2) The Regulator-CRA relationship

As we have already noted, it is actually the regulators that are empowering the CRAs via the NRSRO designation. This regulatory license, as described by Partnoy, forces the issuers to use the CRAs. So, in asset classes like corporate bonds, where there are many issuers, CRAs are not as fearful of losing business. As a result instead of lowering criteria to get business, they simply can afford to save resources and not do an adequate credit analysis, as was the case with Enron. In this relationship, the CRA is acting on behalf of the regulators. The regulators are supposed to control the risk of the institutions that they supervise. Instead they delegate this to the CRAs. The regulators, however, do not pay for this service, nor do they control the product. The only way they can incentivize their agent, is by granting this license, and by controlling the rating process through regulation. Their incentive scheme is one of penalizing the CRAs for lack of compliance. But, if poor

performing ratings is not a violation, then there is no way in the current structure for the principal to control its agent. Moreover, in the current structure, the regulator does not choose or hire a particular CRA.

3) The Investor-CRA relationship

This relationship is the most complex. The investor is the user of ratings. The investor may use it in their investment analysis, or may simply use it to satisfy regulatory requirements. The investor doesn't pay for the ratings nor does it get to choose the CRA. Yet, the CRA is performing a function for the investor. So, in this sense, the CRA is an agent for the investor. There is very little that the investor can do to get the CRA to provide good ratings. All the investor can do is to decline to purchase bonds rated by a CRA that they want to avoid. If it is a large investor, or many investors that do not like the hired CRA, the issuer may then be motivated to hire a different CRA. But, because, thus far, the CRAs have not faced liability for poor analysis, the investor has had no way to control this agent. This lack of power for investors is what leads some to advocate for an investor-pay CRA framework. Alternatively, the new regulations have tried to increase the potential for liability. But, as is demonstrated in the empirical section of this thesis, thus far, even with the new regulations, the CRAs have not been held accountable.

The investor-CRA relationship is made more complicated by the fact that not all investors want correct credit ratings. Some, as discussed, may want inflated ratings to show high risk adjusted-returns, while others may want correct ratings to be used in their investment process. So, effectively, there is not one principal in the case of the investor-CRA relationship.

The result of having different principals involved with the CRA-agent, the motivations for the CRA to act in a consistent manner are often conflicting. It appears from the financial crisis that the CRAs focused on their agent role with the issuers.

Some are of the view that CRA analysts are similar to equity analysts at the Wall Street firms. Indeed, there are some similarities. For example, they both use financial statements

to analyze the condition of a company. Moreover, they both may have motivations to make issuers happy by giving good reports. And, their information may be used by investors in their investment process. But, a key difference is that, whereas equity analysts make recommendations, such as buy or sell, CRA analysts do not make any such recommendations. A major problem and difference is that securities analysts have real liability for baseless recommendations or biased recommendations. In there was a major regulatory actions against them and a subsequent settlement with the SEC. Major penalties were imposed, and changes in the way research was structured and managed had to be changed at the investment banks (Ten of Nation's Top... 2003).

In some ways there might be more similarity between external auditors and CRAs. Both are giving opinions, not recommendations, based on a review of information provided by the issuer.

However, in the case of the accounting firm, they are just opining on whether or not the financial statements fairly reflect the company information and whether recognized standards for reporting were used. The approach has to be the same by all certified accounting firms as there are international standards for accounting. On the other hand CRAs, are giving opinions about future performance. There are no common standards, nor is there an agreement as to what the ratings mean.

In both cases, equity analysts and auditing firms, the principal-agent relationship exists, even though it is complicated as well by the fact that investors are the users of the output.

2.4. A Survey of the Academic Literature

In this section a brief overview of the major research is provided along with some analysis and critique. One of the early critics of the CRAs was Frank Partnoy, Professor of Law, at the University of San Diego. In his view the informational value of credit ratings has declined dramatically. Yet, the credit ratings are still widely used, and the CRAs are still highly profitable.

In a normal market, Partnoy notes that “reputational capital” should be able to provide the discipline necessary to maintain the quality of credit ratings (Partnoy 1999: 627). The idea is that investors and others will be more likely to demand ratings from a CRA whose ratings are accurate. Reputational capital is accumulated over time, by doing a good job. No CRA would want to risk its reputation by doing a poor job or artificially inflating a rating to make an issuer happy. “Raters who invest more in their investigative and decision-making process (and who therefore generate more accurate and valuable ratings) acquire greater reputational capital”. And, as a result, “the consumer of a product will purchase a rating if the expected benefit of the rating minus the actual cost of the rating, is both positive and greater than the expected benefit of an independent investigation minus the actual cost of such an investigation”. Furthermore, if a CRA’s ratings repeatedly performed poorly, and assuming few barriers to entry, new CRAs would be created. In such a world, no regulation would be necessary to encourage quality credit ratings.

His explanation for why the discipline of “reputational capital” is not working is that by creating rules that depend on credit ratings, the regulators have empowered the CRAs to grant what he calls “regulatory licenses”(Ibid.: 623). Essentially, they gave the power to the CRAs to determine compliance with regulations.

There are several negative effects of this empowerment. First, there is less need for a CRA to worry about the quality of its ratings. The investor wants the credit rating because he needs to have it to satisfy a regulation, not because of its informational value. Therefore, the CRA can focus its efforts on getting new business, and can do so by lowering their standards. The issuer needs a high rating to sell his bonds, and so, there is a strong incentive for the CRA to cater to the issuer.

Partnoy supports his view that the rise of the CRAs, despite episodes of poor performance, comes from their power, given to them by the regulators, to satisfy regulations, by pointing out how they became increasingly important in 1930, just after the Great Crash, as ratings performed very poorly. It was at this point that the Federal Reserve Bank began using credit ratings to measure a bank’s risk. He goes on to point out, what has already been discussed,

namely the empowerment of the NRSRO designation, and the use of credit ratings in many areas of financial regulation. “The resulting web of regulation is so thick that a thorough review would occupy hundreds, perhaps thousands, of pages”.

He also believes that the regulatory endorsement of credit ratings is one of the main reasons that the big 3 CRAs, began charging issuers instead of investors for the ratings (Partnoy 1999: 705). “US rating revenues increased along with the quantity of US regulation”. “Today, issuers are paying rating fees, not to purchase credibility with the investor community, but rather to purchase a license from the regulators”.

Partnoy’s solution to the failure of the rating agencies arising from their empowerment, is at the extreme end of the spectrum. He was an early advocate, of completely taking credit rating out of all regulations. This could be accomplished directly by removing references to credit ratings in regulations or indirectly by doing away with the NRSRO designation.

Of course, the problem would then arise for the regulator as to what to use measure the risk of institutions that they are supposed to regulate. “In place of ratings-dependent regulation”, he recommends the use of market credit spreads (*Ibid.*: 706). Credit spreads are essentially the market price for credit risk. They represent the cost for insuring the credit risk. In the market this risk is traded in the form of credit default swaps (CDS) (*Ibid.*: 708). The greater the spread, the greater the risk.

While Partnoy’s solution of removing credit ratings from regulation seems simple and appealing, it has some severe limitations. While taking back the “regulatory license” power, would certainly disempower the CRAs, regulators will still need a method for regulating risk. Some argue (Coffee) that Partnoy’s suggestion of using credit spreads is of limited value, because they are unavailable for many securities, moreover credit spreads can be volatile (and users of credit ratings prefer stable ratings). On the other hand, if regulators do the job that they are supposed to, they could create their own methodology as the Federal Reserve has recently done with its ‘stress tests’ for banks (Comprehensive Capital Analysis... 2012).

In a subsequent paper (Partnoy 2006), backed off a bit from his suggestion of eliminating the NRSRO designation, because he recognized that it was probably politically impossible to do this. But he still felt that, “The ideal proposals would reduce the benefits associated with regulatory licenses and impose a real threat of liability on credit rating agencies for malfeasance” (*Ibid.*: 37).

Instead, of completely doing away with the NRSRO, he considered several other proposals, such as encouraging the creation of more NRSROs, to increase competition, again he suggested market-based risk measures, or alternatively, establish a simple registration process for CRAs. He clearly does not really endorse more NRSROs. First, because, as he posits, it may be that the credit ratings market really is a natural monopoly or oligopoly. Also, introducing more NRSROs because does not get at the root of the regulatory license problem. Although he does introduce the possibility of adding an NRSRO that uses market-based credit scoring, as this could serve as useful information to the market.

Partnoy completely rejects the idea of self-regulatory, or voluntary system of regulation. He specifically cites the S&P Code of Conduct, and points out that S&P itself disclaims liability from its own code! (*Ibid.*: 46)

But, with together with any of these ideas of reducing the power of the regulatory license, he is an advocate for greater rating agency liability for malfeasance. That is, if we have to have NRSROs, then they should be subject to much greater liability.

Another major academic researcher in the area of CRA reform is Professor John Coffee, jr of Columbia University. In a paper which was originally presented in 2010, and then updated in 2011 to reflect ideas in the Dodd-Frank Act, Coffee rejects Partnoy’s view that the main problem is the “licensing power” granted to the CRAs, but rather it is the fundamental, conflict of interest inherent in the issuer-pay model. He concedes that the licensing power theory can explain the current lack of competition among CRAs, since there are still large barriers to entry for new players (Coffee 2010).

But, since he is of the view that, since “At the end of the day, for better or worse, the CRAs seem likely to remain a permanent part of the financial infrastructure”, regulatory reform is necessary and the only practical solution. Unlike Partnoy, he believes that “alternatives to credit ratings, such as credit default swap spreads, provide at best only a partial substitute” (*Ibid.*: 233).

He asserts that the US housing finance market is dependent on credit ratings. The author disagrees with this point, because the securitization of US Government mortgages, from government agencies such as Ginnie Mae, and Fannie Mae, which are the bulk of US mortgages, do not use credit ratings. It was only the subprime and other non-conforming mortgages that needed credit ratings in RMBS.

He argues that because of the conflicts of interest, the CRAs had too little incentive to get their credit ratings right. In his approach to solving the CRA problem, he clearly articulates that the “differences in diagnoses of the credit rating problems”, lead to major differences in the solutions. So it is important from his perspective to correctly identify the problem.

Coffee goes on to describe two main schools of thought. The first, which he subscribes to, is that it is the conflicts of interest which corrupt the CRAs. He believes that as a result of the conflicts that they face to, on the hand uphold their reputation, but on the other hand to maximize profit, “the CRAs may willingly (even cynically) sacrifice some reputational capital for enhanced revenues, at least so long as barriers to entry remain high and their legal liability stays low”. The other school of thought, for which Partnoy is the champion, is that the CRAs greedily exploit the regulatory license that regulators have delegated to them (*Ibid.*: 232).

He “begins with the premise that CRAs do provide valuable information that strongly influences the cost of capital”. While others such as Adam Ashcraft, et al (MBS Ratings and the Mortgage Credit Boom 2010) share this view, it was clear that Partnoy did not. This is an important difference, because if one believes that the credit ratings provided by the three major CRAs are of little analytic value, then, the conclusion must be that the only reason that they are used, is to satisfy regulations. And, if this is the case, surely the

regulators cannot be happy with this. But, is there any way to implement regulations to enforce better quality rating?

The solutions to the problem caused by the first view, are to implement reforms which will reduce or mitigate the conflicts of interest. He argues for somehow cutting the link between the choice of CRA, and the fees paid. One way to do this is via the subscriber/investor-pay model, instead of the issuer pay model.

He asserts that “all want increased competition among CRAs”, but notes that “it can encourage ratings arbitrage, as issuers pressure competing rating agencies to relax their standards to obtain business”. Moreover, the barriers to entry are high, and are “likely to remain high”. (Coffee 2010: 234).

While many, like Coffee, point to the conflicts of interest in the issuer-pay framework, Coffee adds an important dynamic, often over-looked by others. “A dirty little secret about credit ratings must be recognized: investors have biases of their own, and many want inflated and stable credit ratings that allow them to hold risky securities”. One way to mitigate this conflict, as Coffee points out, is “deny institutional investors the ability to use ratings as a form of insurance that protects them from legal consequences of unsound investment decisions”

Another researcher also cites the investors as contributing to the crisis, by favoring inflated ratings. In a recent research, Professor Calomiris also bear a sizable share of the blame for inflated ratings (Calomiris 2009: 4). Institutional investors were as knowledgeable as the investment banks and rating agencies. They could have said no, when they were being offered bonds with ratings that did not make sense. He points out that institutional investors have incentives to encourage inflated ratings. In his research he lists three reasons:

- 1) increase institutional investors' flexibility in making rating decisions;
- 2) reduce the amount of capital, some of them have to maintain against their investments, or;
- 3) increase their perceived risk-adjusted profitability.

He concludes that ratings inflation was demanded by the buy-side, because it benefits them. Therefore, the contention made by many, and discussed in the following section, that ratings were inflated due to misaligned incentives of the issuer-pay model, is incorrect. And, therefore, simply changing the compensation scheme of rating agencies, would not solve the problems at all.

This point is important, because, he is highlighting the fact that investor/subscriber model also has conflicts, and that there are investors who also do not want high quality ratings. If, this is truly the case, that both issuers and investors do not really care about the quality of credit ratings, then who does want high quality credit ratings? Perhaps, it is only the regulators, who do not want or do not have the capacity to measure the credit risk of the institutions that they regulate, that want high quality credit ratings.

Coffee points out that “competition will work only when rating agencies compete based on ratings accuracy, rather than in offering promotional benefits to issuers or legal protection for investors”. He cites, Becker and Milbourn who found that increased competition led to “significant inflation in ratings” (Becker, Milbourn 2010).

Regarding Europe, Coffee notes that “Europe has not accorded the credit rating agencies the same de facto regulatory power as the United States has with the result that downsizing their regulatory role may be a less important objective in Europe”. At least until the most recent financial crisis, Coffee viewed European regulation of CRAs as a “comply or explain model”. Basically, a CRA would voluntarily agree to a Code of Conduct, and then explain why it, in some case, it deviated from its Code of Conduct or IOSCO’s Code of Conduct. Following the financial crisis, Europe began to move towards greater regulation of CRAs. The regulators support greater competition. In some ways, Coffee points out, Europe went further, because the regulator was given the power to evaluate CRA methodologies. This is a major departure from the US point of view that the CRAs should remain analytically free.

Perhaps the fact that European regulators relied less on credit ratings than the US, is why there was less abuse of the credit ratings and less CRA performance failure in Europe, as discussed briefly later in the empirical section of this thesis.

Despite the potential for conflict of interest under the investor-pay model, Coffee argues that the current “issuer pays” business model must be changed. This should be done by “either (1) divorce issuer payment of the CRA from issuer selection of the CRA or (2) encourage (and implicitly subsidize) an alternative “subscriber pays” market for ratings.

An important area that Coffee discusses and that shows up later in regulatory discussions, is the issue of who is responsible for the accuracy of the data that is used in CRA models and analysis. Coffee contends that CRAs are “unique among gatekeepers”, in that unlike auditors, or securities analysts, CRAs do not verify the information which they use and on which their models rely. Thus, they are subject to the, “GIGO Effect”- Garbage in, Garbage Out”!

Coffee’s view on increased CRA liability is not as clear as others. While the idea is popular to punish the CRAs from wrongdoing, he has some reservations. First, he notes that large financial penalties “could easily bankrupt the CRAs”. (Coffee 2010: 252). Second, the increased liability, could lead the CRAs to withdraw from rating certain products. He argues in essence that making sure they get it right, is more important than penalizing them if they get it wrong.

Coffee fully rejects the idea of solving the problems by creating a government-run CRA. This framework, would have its own conflicts. It would be difficult to imagine such an entity rating sovereign debt, for example. Moreover, private CRAs would be at risk if they had a different view from the government rating agency. Another point, not made by Coffee, is that if there were a government CRA, the government would then essentially be taking on the risk and potential liability for errors.

Because Coffee stresses the potential usefulness of credit ratings, he emphasizes that regulatory focus should be on ensuring that CRAs have sufficient high quality staff, and analytic systems and resources.

Another major stream of thought is that the main reason for the inflated credit ratings is the business model. In a very recent research (February 2013), Professor Dion Bongaerts, of

Rotterdam School of Management, attempts to prove that while system of investor paid ratings or mandatory co-investment would improve social welfare of credit ratings, a high degree of regulation would be needed to create these systems (Bongaerts 2013).

Like Coffee, Bongaerts argues that the issuer-pay model creates distortions in the incentives for CRAs, which leads them to issue inflated ratings. He presents several different business models which try to align the incentives between investors and CRAs. He believes that any of the approaches he analyzes improve on the current situation. His approach is highly mathematical, but a number of points can be extracted.

He analyzes in detail the idea of forcing CRAs to “co-invest” in the risk. The idea is to somehow require CRAs to invest in a portion of the deals which they rate. The argument is that this would align their interests with the investor. Of course, for this to work, it would be necessary for the investment to be meaningful, and the expected cost of being wrong would have to exceed the fee earned for issuing inflated ratings. Critics of this approach would say that CRAs do not have sufficient funds for this, and therefore there would be many fewer rated securities. Nevertheless, Bongaerts persists in thinking that this is a very good solution. Empirical evidence against his view is discussed in a later section of this thesis.

It would seem that investor-paid ratings, would align CRA incentives with investors. But, it does not prevent issuers from still using issuer-pay CRAs. And in Bongaerts’ model issuer-paid CRAs will dominate,” because they will never generate a rating that will not be used”, and paid for. He argues that this is not generally the case for the subscriber-model, where a subscriber-based CRA will rate a whole range of securities, whether or not the subscriber pays for a specific issue to be rated. Thus, subscriber-paid CRAs would not survive, unless issuer-paid CRAs are banned. In any case, Bongaerts raises the free-riding problem that is endemic to the subscriber-pay model, where it is likely that non-paying investors will get to use the ratings for free.

Bongaerts seems to agree with the other academics such as Skreta and Veldkamp (Ratings Shopping... 2008) that competition among CRAs “is likely to reduce social welfare,

primarily because of rating shopping” His model also supports the notion that “reputation is insufficient to enforce accurate ratings”, similar to Partnoy’s conclusion.

He also points out, in support of Partnoy, that, indeed, regulatory requirements are a major driver for the use of credit ratings. An interesting point is that the regulatory requirements can lead to shocks, when rating downgrades lead to massive sales of securities and resulting investor losses. For example if a regulation requires a minimum single-A rating, and a whole sector gets downgraded, investors would be forced to sell.

Bongaerts argues that financial intermediaries can make strong arguments against very strict regulation. “Restricting financial intermediaries too much can hamper credit supply, which immediately leads to real economic losses.”, And, so perhaps, “Accepting a limited amount of moral hazard may from a social welfare perspective be preferable over a severely reduced credit supply”. It is these kind of scare tactics that make regulators and politicians cautious when considering adding new regulations.

Ekins and Calabria make arguments similar to Portnay, that the CRAs were granted power to give regulatory licenses, and this was the main cause for inflated ratings (Ekins, Calabria 2012).

They believe that the NRSRO designation should be abolished, and “regulators should work to eliminate regulatory reliance on credit ratings for financial safety”. Under their proposal, market participants could choose to use CRA credit ratings, but they would also be free to use other credit-risk analyses or systems. They seem to support the use of market-based measures like the spreads on CDS. They agree that increased competition alone, will not solve the problem, but possibly exacerbate it.

They note that reducing the central gatekeeper role of the CRAs will place increase cost on market participants who will now have to do their own credit work, but the alternative as happened in the recent financial crisis is more costly.

An important point stressed by Miglionico (Enhancing the regulation... 2012) is the importance of transparency of CRAs rating performance and rating methodologies (*Ibid.*: 65). In his view this would go a long way in helping investors and regulators to understand what the ratings mean, and their limitations. And it would facilitate a comparison between CRAs. He quotes Black (The Legal and... 2000) who wrote “transparency is a collective good that must be established by regulation”.

Despite the recent financial crisis, insurance regulators continue to use credit agency ratings. In his paper, "The Rating Dependent Regulation of Insurance", Professor Hunt, argues that it is impossible to take the ratings out of regulation, as required by the Dodd-Frank legislation (discussed later) for federal regulations (Hunt 2011). “Rating-agency reformers have good arguments for removing private credit ratings from the regulatory system. At the same time, financial regulators have both good reasons and strong incentives to continue relying on private credit ratings or something very much like them. Congress’ recent expression of desire to eliminate credit ratings from financial regulation, taken together with state insurance regulators’ reaffirmation of the role of ratings in regulation, sets the stage for a confrontation on this score.”

Hunt suggests that for new products, there should be a seasoning period before the credit ratings should be used by insurance companies and their regulators. In his view, the passage of time is needed to observe credit rating performance, and he believes it is possible that this could have minimized the damage from RMBS backed by subprime mortgages.

German economist, and Professor of Economics, University of Würzburg and Member of the German Council of Economic Experts ,Peter Bofinger suggests that a government owned CRA should be created. “Without a profit motive, the incentives would no longer be biased” (Re-Defining the Global Economy 2009: 33-36).

Furthermore, “Ratings by public institutions would thus be consistent with the principle of competence and liability. The shift from private to public agencies could induce a relatively conservative rating culture but given the huge social costs of imprudent ratings by private agencies such a conservative bias is exactly the element of stability that is required for a

more robust financial architecture.” While he acknowledges the problems that might occur if government created credit ratings were wrong, he points out that “the current crisis shows, governments are already now obliged to bail-out banks that have relied on the ratings of private institutions.”

Most of the theoretical constructs for re-forming the CRAs have been presented in this section. The thesis now proceeds to discuss how the regulations that have been adopted fit into these frameworks, and how they have worked empirically.

3. EMPIRICAL FINDINGS

3.1. The Role of the Credit Rating Agencies in the Sub-prime Mortgage Crisis, the Housing Bubble, and the Global Financial Collapse.

The Sub-prime mortgage crisis refers to the boom in sub-prime mortgage lending, the securitization of these into mortgage-backed securities, and the collapse of this market in 2007, leading to the bankruptcy of Lehman Brothers, the collapse of Bear Stearns, AIG, and other financial institutions, followed by the worst economic contraction since the Great Depression. This lending bubble was long in the making. The surge in mortgage origination began in 2001, it peaked in 2003. However, the expansion of the sub-prime mortgage market, and its derivatives (RMBS, credit default swaps, CDOs, etc), supplanted the conventional mortgage market, and continued to grow until it completely collapsed by the end of 2007 to mid 2008.

In discussing the sub-prime mortgage crisis, it is really not possible to separate this from the housing bubble. The easy credit market which was super-charged by poorly and often fraudulently originated sub-prime mortgages, fueled a boom in housing prices. This bubble was, for a variety of reasons, far greater in size, (and therefore in its impact when it burst), than any prior bubble in history. The impact was global. While great real estate bubbles have occurred locally throughout history, none of them have come close to the size of the US housing bubble and its derivative mortgage bubble.

The causes of the sub-prime mortgage crisis are complex and involved many players. As noted in "The Sub-prime Problem: Causes and Lessons" Adelson & Jacob, 2008, "Like the fall of Rome, and the sinking of the Titanic, there are many causes of the sub-prime

problem. There were so many actors in this tragic play. There were the mortgage originators, the banks, the government housing agencies (Fannie Mae & Freddie Mac), Wall Street investment banks, greedy and unsophisticated investors, the rating agencies, government policy makers, and government regulators. It became global, as foreign financial institutions and investors purchased the securities that financed this debacle. But, there is no doubt that without the AAA blessing of the rating agencies that they granted to the mortgage-backed securities, the market disaster could not have occurred.

As the rate of home ownership increased, the number of qualified borrowers decreased. So, lots of "clever" people from the government to Wall Street, to the rating agencies, found a way to help unqualified borrowers (people with low credit scores FICO (myFICO website) participate in the dream of owning a home. They created loans with so called "teaser interest rates". These were loans with low initial interest rates, which would rise over time. Conventional loans required a borrower to show income and there was a limit on the amount borrowed based on loan-to-value. Instead these new loans, required little or no documentation, and had LTV's that sometimes exceeded 100% of the value of the home. These mortgages were known as sub-prime mortgages. The rating agencies helped by, rating the majority of the securities and their derivatives that were backed by these mortgages, AAA. Naturally, the resulting increase in demand for housing fueled a further increase in home prices, which in turn fueled a further increase in a demand for housing.

The sub-prime mortgages that were financing these home purchases were not held by the banks, but were instead packaged into mortgage-backed securities and sold worldwide. Sometimes the lower rated bond classes were re-packaged into CDO's (collateralized debt obligations), and sold to investors who failed to do their own analysis, but instead relied on the rating agencies. When buyers for the securities could no longer be found, the search was on for "the greater fool" and he was found in municipalities in Norway, and retail investors in Hong Kong. Bill Gross the head of PIMCO, one of the largest fixed income funds said of the ratings agencies, " AAA? you were wooed, Mr. Moody's and Mr Poor's, by the makeup, those six-inch hooker heels, and a "tramp stamp" (Gross 2010).

In 2006, the housing bubble began to burst. The low teaser interest rates on the sub-prime mortgages, began to reset upwards, and homeowners could not make the payments. Foreclosure rates increased, and home prices fell. Home sales decreased, because there were not enough buyers to hold back the tsunami. The banks and investors were stuck with mortgages and mortgage-backed securities that were worth a tiny fraction of their initial value, and even homeowners who had not lost their homes to foreclosure, had negative equity in their homes. One of the largest insurance companies, AIG, faced huge losses, collapsed, and had to be supported by the government. Fannie Mae and Freddie Mac had to be taken over by the government. Lehman Brothers and Bear Stearns went out of business. Merrill Lynch had to be acquired by Bank of America. One of the largest savings banks, Washington Mutual had to be acquired by JP Morgan. Wachovia Bank was purchased by Citigroup, and Countrywide Savings, the largest originator of home mortgages went bankrupt. And, now, 6 years later, home prices in the US have finally begun to bottom out, and US financial institutions are finally recovering.

One of the most corrosive behaviors in the credit rating market is known as "rating shopping". This can occur when an issuer seeks to engage a rating agency to provide a rating for their new issue. The role of choosing which rating agency to use is delegated to the investment bank which is working for the issuer to sell its debt. In the structured finance market, the investment bank might also be the sponsor of the securitization (effectively, the issuer).

The issuer is interested in obtaining the highest possible rating (or the lowest level of credit enhancement in the case of structured finance), from the most respected rating agency. This is because, this will result in the lowest cost of funds. The investment bank will try to optimize the choice of rating agency by weighing the trade-off between using a rating agency from whom it would be easier, in terms of rating criteria, to get a high rating, versus how investors would view a rating from that agency. It comes down to the interest rate that the issuer will pay. The higher the rating the lower the interest rate as discussed earlier. But, if investors view the rating agency as having easy criteria, they may tell the investment bank that they need compensation in the form of a higher interest rate.

Rating shopping is where the issuer, after discussing a possible rating engagement with one rating agency, decides to try another rating agency in order to, perhaps, get a higher rating. They then might call back the first agency, and point out the better treatment of the competing rating agency. The first agency, is then, strongly incentivized to match the rating of the second agency, by adjusting their criteria and opinions, so as not to lose the business and market share. This is known as the "the race to the bottom". The practice was rampant during the run up to the crisis as rating agencies competed fiercely for business..

One of the accusations made against the rating agencies, is that they actually helped the issuers to structure the transactions, that, they went ahead and rated. That's like a student creating his own exam, and then grading it! The idea is that the issuer would show the rating agency a transaction that it was considering, and propose a structure and credit enhancement. Then rating agency would discuss, maybe negotiate, with the issuer, how to get most AAA bonds. This has not been proven one way or another. But, the government was so unhappy about this possibility that they passed a rule prohibiting this behavior (Appendix 2).

3.2. Credit rating performance

In this section the performance of the credit rating agencies is discussed. Since there has been little substantive difference among the rating agencies, data from one of the agencies (Standard & Poor's) is used. It is important to discuss performance not only from the perspective of how good or poor job they have done in assessing credit risk, but also because it has bearing on the discussion of regulation. For example, what happens when a rating turns out to be wrong? Should there be rating agency liability? Should it matter if the error was a mistake in judgment and analysis versus an error arising from deliberately lax rating criteria?

As with so many things in the discussion of the rating agencies, at first, it seems, that it should be easy to measure performance of the ratings. After all, why not simply look at

some measure of default rates versus ratings? However, it turns out that measuring the performance of ratings is not so straightforward.

First, one can only attempt to answer the question of ratings performance in retrospect; that is after time has passed, and during periods of economic stress. At the time a rating is issued, it is, a "forward-looking opinion"! But, even after time has passed, is a rating wrong if an issuer defaults? If it was originally, speculative grade, some would say, that a default was possible, and maybe likely, so maybe the rating was correct. But, what if a AAA defaults, does that mean the original rating was wrong? Again, not necessarily. Suppose that the world economy deteriorated to something worse than the Great Depression. Then, according to S&P's definition this originally rated AAA security most likely would default.

Even default rates are a subject of controversy, because defining default is not always easy. For example, if a loan is restructured like recently with Greek sovereign debt - is that a default (Greece Default Is Official...2012)? Since credit-worthiness changes as the economy changes and a company's fortunes change, the credit ratings must change. So measuring performance needs to account for this.

Standard & Poor's has been publishing performance statistics for many years, as have Moody's and Fitch. S&P has tracked performance on structured finance securities since 1974, government bonds since 1975 and corporate debt since 1981. S&P measures its ratings performance by first calculating default rates, by cohorts of original ratings, i.e. credit ratings and the time of original issuance of the debt. So, all else equal, if ratings are performing well, securities that were originally rated AAA should, over time, have lower default rates than securities with lower original credit ratings.

The below shows S&P's global one-year % default rates for corporate bonds by rating, by year.

Table 2. Global corporate one-year default rates by rating category (%).

	AAA	AA	A	BBB	BB	B	CCC/C
1981	0	0	0	0	0	2,27	0
1985	0	0	0	0	1,48	6,44	15,38
1990	0	0	0	0,58	3,56	8,54	31,25
1995	0	0	0	0,17	0,98	4,59	28
2000	0	0	0,26	0,37	1,25	7,73	34,12
2005	0	0	0	0,07	0,2	1,73	8,94
2010	0	0	0	0	0,55	0,8	22,27

*Source: (How does Standard & Poor's measure performance?).

As can be seen from this table, there have been virtually no defaults after one year for securities rated "A" and above, whereas there has been a very high incidence of default in the lower rated categories. And, going from BB to CCC/C, there is an increasing default rate. This relationship holds true across many years. The absolute default rates vary, because the business conditions were very different in each of these years. For example, the default rate on BBB securities in 1990, exceeded the default rate of BB securities in 2005 and 2010.

Another measure to look at for evaluating performance is cumulative default rates. This measure looks at default rates over time. If ratings are performing properly, one would again expect lower rated securities to have higher cumulative default rates. The table below shows global corporate average cumulative default rates from 1981-2010.

Table 3. Global corporate average cumulative default rates 1981-2010 (%).

	1	3	5	7	9	11	13	15
AAA	0	0,14	0,38	0,56	0,72	0,83	0,91	1,09
BBB	0,25	1,19	2,43	3,59	4,68	5,78	6,72	7,71
CCC/C	27,39	42,12	47,64	49,72	51,88	53,71	55,67	56,55

*Source: (How does Standard & Poor's measure performance?).

Again, looking at these statistics, it appears that the ratings have performed reasonably well, from a number of perspectives. First, AAA rated securities have performed very well. For example, only 1.09%, on average defaulted over 15 year periods from 1981-2010.

Moreover, the ratings seem to have correctly ordered the default experience. That is, lower rated securities default far more often.

Another statistic that S&P uses to measure performance are ratings transition matrices. Rating transitions measure the volatility of a rating. Transition rates describe how ratings either remain unchanged, or change from one rating category to another. In the table below 2010 global corporate rating transition rates are shown.

Table 4. 2010 Global corporate transition rates (%).

From/to	AAA	AA	A	BBB	BB	B	CCC/C	D	NR
AAA	73,61	25	0	1,39	0	0	0	0	
AA	1,33	82,76	10,08	0	0	0	0	0	5,84
A	0,07	1,11	92,32	3,54	0	0,07	0	0	2,88
BBB	0	0	2,86	90,34	1,9	0,14	0	0	4,76
BB	0	0	0	5,61	81,74	3,85	0,11	0,55	8,14
B	0	0	0,09	0	6,26	81,32	2,06	0,8	9,47
CCC/C	0	0	0	0	0,45	29,55	33,64	22,27	14,09

*Source: (How does Standard & Poor's measure performance?).

*NR means rating withdrawn. Usually either due to lack of sufficient information, or issuer non-renewal.

The way to read this table is, for example, in 2010, 82.76% of corporate bonds that were rated AA in the beginning of the year, remained rated AA by the end of the year, whereas, 1.9% of bonds that began the year as BBB, ended the year as BB rated. While the relationship is imperfect, it is evident that most investment grade ratings experienced less rating volatility than the below investment grade (below BBB) bonds. Rating agencies strive for stable credit ratings. This in contrast to market based measures, which respond to every piece of market information.

The performance story for corporate bonds looks quite good, especially considering that the time period includes the very difficult years of the financial crisis. Situations like Enron, while very disturbing, were very rare. As noted earlier there are very few AAA rated

corporate bonds. In 2011, only 4 US companies were rated AAA: Exxon, ADP, Johnson & Johnson, and Microsoft (AAA-Rated Companies... 2011).

The performance story is entirely different for structured finance securities, particularly in the USA, in RMBS, CMBS, and CDOs, during the recent financial crisis. And, the performance, more than 5 years into the crisis is still not good, as indicated by the title of Standard & Poor's most recent default study indicates "credit quality fell for the 5th consecutive year". Some might say that it wasn't so much that credit quality fell, but that S&P's original assessment was wrong (Default Study: Global... 2012)!

No matter which statistic is used to compare the performance of structured finance bonds to that of corporate bonds, it is very clear that structured finance ratings did a very poor job of estimating credit quality.

The table below shows S&P's global one-year % default rates for ABS bonds by rating, by year (1978-2011).

Table 5. Global structured finance one-year default rates (%).

	AAA	AA	A	BBB	BB	B	CCC	CC/C
1981	0	0	0					
1985	0	0	0	0				
1990	0	0	0	0	0	0	0	
1995	0	0	0	0,3	0,93	0,93	48,39	71,43
2000	0	0	0	0,07	0,47	1,86	4,55	8,25
2005	0	0	0	0,06	0,19	1,35	12,46	27,62
2009	0,3	1,42	3,11	6,1	10	20,8	49,95	65,69
2010	0,28	0,56	0,71	1,82	2,95	6,8	17,75	38,63

*Source: (Default Study: Global... 2012).

Table 6. Global Structure Finance cumulative default rates 1978-2011 (%).

	1	2	3	4	5	6	7	8	9	10
AAA	0,12	0,55	1,38	2,4	3,02	3,31	3,44	3,55	3,64	3,72
BBB	1,41	7,62	15,04	21,05	25,39	28,25	29,96	30,98	31,78	32,37
CCC/C	37,76	57,77	72,26	76,69	79,55	81,79	83,45	85,16	86,15	86,35

*Source: (Global Structured Finance...2012, table 10).

A good comparison of performance of ratings across asset classes can be found in a discussion paper by, Bin Zhou and Pavitra Kumar, entitled, “Economic Considerations in Litigation Against the Credit Rating Agencies” (Zhou, B., Kumar, P. 2012).

Table 7. Default Percentages by Asset Class and Initial Credit Rating (1980-2010).

initial rating	corporate	municipal	sovereign	Structured
AAA	.16	.05	.00	3,64
AA	.34	.00	.00	20,21
A	.51	.00	.00	26,97

*Source: (Economic Considerations in Litigation...2012).

Examining the performance more closely, as mentioned earlier, it can be seen that the rating downgrades have been the most severe in the USA, in mortgage-backed securities, and CDO's backed by mortgage securities.

Table 8. S&P Global Structured finance annual downgrade transition by region and by sector, 2000-2011 (%).

Region/sector	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
USA												
ABS	3,18	2,9	7,55	19,15	8,42	2,13	3,65	2,35	13,22	9,12	13,18	9,93
CDO	5,08	5,36	11,85	10,83	4,24	3,78	2,92	11,18	43,76	49,81	35,82	32,43
CMBS	1,52	3,91	6,03	7,67	4,42	2,28	2,07	1,79	14,05	41,75	42,34	40,82
RMBS	1,93	1,05	0,98	0,83	0,44	0,63	1,03	15,66	48,82	71,36	38,39	46,18
Europe												
ABS	2,1	1,23	4,57	2,81	3,53	0,4	3,61	0,94	6,12	15,53	11,99	21,55
CDO	0	7,97	20,72	16,4	3,45	4,1	5,31	4,44	31,11	42,08	41,31	13,19
CMBS	0	0	1,1	4,56	3,43	2,32	0,68	0,52	7,43	38,8	28,63	39,19
RMBS	0	0,36	0,73	0,34	0	0,34	0,19	0,28	6,13	15,39	8,58	28,09

*Source: (Global Structured... 2012, table 5).

The size of the rating changes in structured finance hit record highs in 2008 and 2009. Since the economic conditions were the same, clearly the performance of the credit ratings in structured finance was terrible, especially compared to corporate bonds.

It is important to understand why the ratings performed so much more poorly in ABS than in any other sector. One possible explanation is that , “the analysis in the US RMBS sector was based on a flawed assumption of future increases in home values. This one assumption permeated the ratings of \$trillion of RMBS. Similarly for CDOs backed by tranches of RMBS deals the assumption that diversity of the underlying bonds implied a lower correlation, led to an underestimate of the risk. This is so different from corporate bonds, or sovereign bonds, where the risks of each company or country are distinct” (Appendix 2).

Unlike the relatively isolated cases in corporate bonds such as Enron, where most agree the errors were due to incompetence, many believe that the disastrous performance of structured finance ratings was due to improper behavior of the CRAs to generate profits. It has been asserted that the CRAs purposely lowered their standards to gain market share. This is difficult to prove, and the courts are still working through whether or not there was

illegal behavior. But, even if the courts cannot find illegal behavior, the reason could be that the regulations did not rule out the behavior that facilitated the crisis.

3.3. Government hearings on the Rating Agencies and Litigations

1. Government Hearings

After each crisis, there are government hearings followed by new regulations. The default in 1970, by the Penn Central Railroad, led the SEC to create the NRSRO designation in 1975. The Enron fiasco, resulted in Congressional hearings: Rating the Raters: Enron and the Credit Rating Agencies, Hearing Before the Senate Governmental Affairs Committee, 107th Cong., S. Hrg. 107-471 (March 20, 2002) and the Sarbanes-Oxley Act 2002. Later on the government passed the Credit Rating Agency Reform Act in 2006. Shortly after the CRA Reform Act was passed the financial crisis ensued. More hearings were held (Wall Street and the Financial Crisis... 2010). And, then, the Dodd-Frank Act was passed.

- *Enron hearings*- "Rating the Raters: Enron and the Credit Rating Agencies" (Rating the Rates...2002).

On March, 20, 2002, the United States Senate held hearings on the failure of the CRA's in the case of Enron. In his introduction to these hearings the Chairman of the Committee, Senator Joe Lieberman said, "The entire corporate credit-rating industry consists of just three agencies - Moody's Investors Service, Standard & Poor's, and Fitch Ratings - three agencies that exercise significant power over corporate America, the markets, and, therefore, over our entire economy. It seems reasonable to me that power of this magnitude should go hand in hand with some accountability. And yet, once the SEC anoints the credit-rating, they are left alone. So, I think it's appropriate, as we try to learn the lessons of Enron, to ask if the agencies should have some sense of accountability, some oversight, from the SEC perhaps, to ensure they properly perform their function as watchdogs."

During the hearings the CRA's, acknowledged that ratings turned out to be incorrect, but they blamed this on inaccurate and misleading information provided to them by Enron. One

of the professors who testified at this hearing, argued that regulators should remove the use of credit ratings in regulation. This did not happen until almost 10 years later following the latest crisis, under the Dodd-Frank Act.

Even as early as these hearings, the Chairman of the SEC, at that time Isaac Hunt, Jr., acknowledged the reliance on credit ratings in regulation, and that some believe that the NRSRO designation might be creating barriers to entry for new credit rating agencies. Yet despite the recognition by such authorities of the issues around credit ratings, nothing was done following these hearings.

The SEC staff report that was issued on October 8, 2002, following these hearings, concluded that the CRA's displayed a "lack of diligence in their coverage and assessment of Enron". Further, "the staff report also noted, that because CRA's are subject to little, if any, formal regulation or oversight, and their liability traditionally has been limited both by regulatory exemptions and First Amendment protections afforded them by the courts, little exists to hold them accountable for future poor performance."

The staff made recommendations in the areas, of transparency of ratings criteria, management of conflicts of interest, unfair practices, barriers to entry in credit ratings, and oversight. Yet, nothing came of the hearing and the report, until 2006.

- *The Financial Crisis of 2007 hearings* - "Wall Street and the Financial Crisis: The Role of Credit Rating Agencies" (Wall Street and the Financial Crisis... 2010).

On April 23, 2010, the United States Senate held hearings on the role of the CRA's in the financial crisis. Senator Carl Levin co-chairman of the committee in his introductory remarks said, "For a hundred years, Main Street investors trusted U.S. credit rating agencies to guide them toward safe investments. Even sophisticated investors, like pension funds, municipalities, insurance companies, and university endowments, have relied on credit ratings to protect them from Wall Street excesses and distinguish between safe and risky investments. But now, that trust has been broken. We used as case histories the two biggest credit rating agencies in the United States, Moody's and Standard & Poor's, and the ratings

they gave to the key financial instruments that fueled the financial crisis -- residential mortgage backed securities, or RMBS, and collateralized debt obligations, or CDOs. The Subcommittee investigation found that those credit rating agencies allowed Wall Street to impact their analysis, their independence, and their reputation for reliability. And they did it for the money."

This most recent crisis, however, was different. Whereas, with the Enron crisis, the rating agencies were accused of simply being incompetent in missing the issues that led to the collapse of Enron, the view by many of the latest crisis was that the rating agencies were committing fraud. It is no wonder that this is the view held by many, as one reads through a sampling of the emails within the rating agencies that were uncovered by the government as part of their investigation. In the government hearings following the crisis, many rating agency internal emails were made public, which understandably angered the regulators and the public (Appendix 4). Of course, these emails were very embarrassing for the rating agencies, and are playing a central role in the legal actions against the rating agencies.

2. Litigations Against the Rating Agencies

Over the years, there have been many litigations brought against the rating agencies. While there are too many litigations to discuss a few are noted here.

In June 1996, Orange County, in California sued S&P. Orange County was the issuer of bonds that were rated by S&P. The County, which declared bankruptcy in 1994, claimed that the ratings assigned by S&P were too high, and therefore, enabled the Treasurer of the County to take extreme risks with money from the debt that was issued. Orange County claimed that S&P acted as an advisor, and gave erroneous advice, and should be liable for the investment losses suffered by the County. In April 1999, rejected these claims. The court said that credit ratings are published speech and protected by the First Amendment. The Court said that S&P could only be held liable if the County could prove that S&P knew the ratings were false, or didn't care if they were true or false. This is known as "acting with malice"

Connecticut Resources Recovery Authority (CRRA), in 2005 sued CRA's in connection with investments it made in derivatives created by Enron. The Authority entered into energy derivative contracts with Enron (In re Enron... 2005). CRRA, claimed that the rating agencies could have and should have known about the misrepresentations made by Enron.

"The Court finds that CRRA has failed to satisfy any of the specific, enhanced pleading requirements established by courts to overcome First Amendment protection for alleged negligent misrepresentation against any of the Defendant Credit Rating Agencies."

CRRA further claimed that the rating agencies owed it a "duty of care" because of their relationship. The court rule there was no duty of care in this case, and that there was no real relationship. "The Court finds that relationship between the alleged negligent misrepresentation by the Credit Rating Agencies and the harm to CRRA too remote, as a matter of public policy, to impose a duty. The credit reports were distributed to the world at large. At most, the Credit Rating Agencies were rating Enron's creditworthiness for repayment of specific bonds issued during 2000. CRRA did not purchase these bonds. Instead, it made a loan to Enron that was independent of the bonds."

Furthermore, the court found that although the disclaimers that the CRA's include when assigning ratings are not sufficient by themselves to protect the rating agencies from all claims, they do help. "Circumstances of lesser import support the finding of no duty. While insufficient by themselves to preclude liability, the credit reports had clear, unambiguous disclaimers that they were opinions and not guarantees."

From the following court finding, it is quite clear that the rating agencies have tremendous support from the courts. "This Court has previously discussed the significant role played by the Credit Rating Agencies in the efficient operation of capital markets, which would be chilled by unlimited potential liability for creditworthiness ratings."

Teamsters local 282 Pension trust, on September 26, 2007, filed a lawsuit against Moody's and its CFO, Linda Huber (Case 1 :07-cv-O8375-SWK 2007). The Pension fund claimed

that Moody's "misrepresented or failed to disclose that it assigned excessively high ratings to bonds backed by risky subprime mortgages - including bonds packaged as collateralized debt obligations- which was materially misleading to investors concerning the quality and relative risk of these investments. Moreover, even as a downturn in the housing market caused rising delinquencies of the subprime mortgages underlying such bonds, Moody's maintained its excessively high ratings, rather than downgrade the bonds to reflect the true risk of owning subprime-mortgage-backed debt instruments."

The Pension fund had invested in Moody's stock and lost money when the stock price dropped as the financial crisis unfolded. The Pension fund claimed that Moody's and its CFO participated in a "fraudulent scheme and course of business that operated as a fraud or deceit on purchasers of Moody's common stock by disseminating materially false and misleading statements and/or concealing material adverse facts. The scheme:

- deceived the investing public regarding Moody's business, operations and prospects and the intrinsic value of Moody's common stock, and
- caused Plaintiff and other members of the Class to purchase Moody's common stock at artificially inflated prices." In this case, the Pension fund is claiming that Moody's violated securities laws under section 10(b) and 20(a) of the Securities Exchange Act of 1934. The case is still ongoing.

On May 14, 2008, The New Jersey Carpenters Vacation Fund filed a lawsuit against S&P and Moody's, alleging that the rating agencies "failed to conduct due diligence and willingly assigned the highest ratings" to HarborView Mortgage Loan, in return for substantial fees (08 CV 5093 (HB) Opinion & Order 2010).

The suit alleged that "rating shopping" led to incorrectly inflated credit ratings. The suit claims that once the true value of the securities was known, they declined in value. The plaintiffs claim that the CRAs should be held accountable as underwriters of the securities since they helped structure the deal. "According to Plaintiffs, the Rating Agency Defendants played a substantial role in the securitization process. They provided Greenwich Capital with guidance on the selection of loans at the loan auction, so that there

would be sufficient collateral to support a high credit rating; they likewise played a role in suggesting the bid price for those loans."

Shortly after the Pension fund bought the securities, "defaults and delinquencies on the underlying mortgage collateral quickly piled up", and as a result, "the value of the Certificates collapsed." As a result of the "massive increases in borrower delinquency, foreclosure, repossession and bankruptcy in the underlying Certificate collateral" Plaintiffs claim the Certificates have lost "a combined 68% of their initial value." ... over 39% of the underlying loans are delinquent, or in default, foreclosure or bankruptcy. In mid-2007, both Moody's and S&P revised their rating method, re-analyzed the Harborview Trusts, and downgraded almost all of the Certificates, some many levels below their original rating. According to Plaintiffs, the rating agencies downgraded the certificates due to the "aggressive underwriting used in the origination of the collateral." More than 95% of the Certificates have been "downgraded to speculative junk bond investments."

On July 30, 2008, State of Connecticut sued the CRAs (Attorney General Sues... 2008). The State Attorney General accused the rating agencies of "deceptive and unfair practices by systematically giving lower credit ratings to bonds issued by public entities as compared to corporate debt with similar default rates. The suit alleges that the CRAs violated the Connecticut Unfair Trade Practices Act by intentional misrepresenting and omitting facts" (Ellsworth, Porapairoon 2009). It is interesting that Governments worldwide, especially, in Europe, make the same accusations. This is different because most cases involve the claim of inflated ratings. By issuing low ratings, the Connecticut municipal borrowers had to pay more to borrow money. It's also noteworthy that this case is brought based on a State law, rather than Federal regulations. This case is ongoing.

In July 2009, CALPERS, one of the largest pensions funds in the United States, filed a lawsuit against Moody's and Standard & Poor's. The pension fund accused the rating agencies of negligence in giving AAA ratings to three structured finance products, Cheyne Finance, Stanfield Victoria, and Sigma finance. These products were known as SIVs (structured investment vehicles). CALPERS invested \$1.3 billion in these structures in

2006, and subsequently lost \$1 billion. The underlying pool of assets were mostly subprime mortgages.

The rating invoked the First Amendment defense, claiming that ratings were just opinions. In a ruling in 2012, the Superior court judge agreed that credit ratings are constitutionally protected. However, for now, he permitted the case to continue, because CALPERS claims that S&P and Moody's made claims about their ratings, without reasonable grounds to believe them, and that CALPERS relied on those claims. The case is proceeding, but the rating agencies remain confident that they will prevail, as they have in almost every other case (Egelko 2012).

A similar case involving two other investors, Kings County, Washington and Abu Dhabi Commerical Bank who lost money investing in SIVs, rated by Moody's and S&P, is also based on fraud allegations. In this case, the court ruled that the credit ratings were not mere opinions but actionable misrepresentations. And that it was reasonable that investors relied on the ratings, because the rating agencies have access to material non-public information (NY judge won't dismiss... 2012). The case continues.

Some of investors have tried to sue the rating agencies for breach of a contract. This approach has not worked either, because in fact, there is no contract between investors and the rating agencies, in the issuer-pay model. The contract is between the issuer and the rating agency. Investors can still try to claim that they are third-party beneficiary. But, apparently the courts have generally not agreed with this claim.

3. Rating agency legal defenses

While some of the defense strategies have been already been discussed above in the specific cases, it is worth highlighting the categories of defense strategy, that have been, thus far, so successfully used by the CRAs.

One of the major defenses of the rating agencies has been their protection they claim that is provided to them by the Constitution of the United States, which, in its first amendment

provides for the protection of free speech (Defending First Amendment Rights 2005). The courts have upheld the rating agency view on this even when the rating agencies clearly made a mistake. The legal analysis of this that erroneous statements are inevitable in free debate. The rating agencies are treated by the law, as journalists. As a result, plaintiffs need to prove that the CRA, made knowingly false statements or had reckless disregard for the truth. The courts have concluded that the CRAs are constitutionally protected against claims of professional negligence unless there was actual malice. Although breach of contract is not covered by freedom of speech, the rating agencies do not have a contract with investors since they simply publish their ratings for free (under the issuer-pay business model, the issuer contracts with the rating agency)! The court's view is that in terms of speech, error is always possible, and that to be guilty, the plaintiff needs to show intentional misstatement. That is quite a high bar, although reading some of the analysts' emails, it looks like this was the case.

Stephen Alicanti writes in his research paper "A Pattern of Unaccountability: Rating Agency Liability, The Dodd-Frank Act, and and a Financial Crisis that Could Have Been Prevented" regarding the First Amendment Defense. "Although CRAs are financial analysts and not traditional journalists, both receive similar protections under the First Amendment. Without a contractual relationship, fiduciary duty, or intention to injure, traditional journalists are not liable to the public for negligent misrepresentation. Because CRAs publish credit rating in large public offerings, they are held to the same standard as traditional journalists." Alicanti cites a 1997 California court discussion of the Orange County case, where it said that "S&P is constitutionally protected from the County's claim for professional negligence unless there was actual malice."

In his paper on rating agency legal defenses, Schmitt describes the First Amendment defense as follows: "The current First Amendment standard requires real fraud in light of established First Amendment protections."

In a wide array of circumstances, state and federal courts have consistently recognized that S&P and other rating agencies are entitled to the same First Amendment protections as

other financial publishers such as BusinessWeek and The Wall Street Journal. These decisions have been based on widespread juridicial recognition that, at their core, rating agencies perform First Amendment functions by gathering information, analyzing it and disseminating opinions about it- in the form of credit ratings and commentary- to the general public.

From a policy perspective, the fear is that excessive restrictions on these ratings would have a chilling effect on investment recommendations. This would, in turn, deprive investors of the very information they need to manage risk.

Others have tried to attack the rating agencies under securities laws. But, here too, the rating agencies have escaped liability, because they are not selling the securities. For example, in 2010, in the New Jersey Carpenters Vacation Fund and Boilermaker Blacksmith National Pension trust case against the rating agencies, the plaintiffs claimed that the CRAs violated several sections of the securities laws, by "alleged omissions and misstatements in then registration statements and prospectuses filed with the SEC".

The ratings agencies in their defense, argued that "claims against them should be dismissed because:

- SEC regulations preclude a section 11 claim against rating agencies;
- they are not "underwriters" as defined by the Securities Act and do not fall within any of the other specifically enumerated categories of parties that may be liable under section 11."

The court dismissed the claim against the CRAs, because they agreed that the rating agencies are not underwriters of securities, even though the court agreed that the rating agencies' activities were not necessarily innocent!

Plaintiffs have also tried to hold the CRAs liable under the SEC rule 10b-5 (17 C.F.R. § 240.10b-5. Part (b) of Rule 10b-5 makes it unlawful to make any untrue statements of material fact or to omit material facts necessary in order to make statements not

misleading), which is meant to prevent fraud in the secondary market. Once again in order to find someone guilty under this regulation, the plaintiff needs to show a false statement, and carelessness or recklessness, intent, etc. This idea of negligent representation has been attempted against auditors, but, again, to date not successfully against the rating agencies. In his paper, Stephen Schmitt, the author strongly, that CRAs can and should be held liable under rule 10b-5 (Schmitt 2011).

He argues that "there is no inherent reason to protect these for-profit appraisals with the protections of the First Amendment, and that strong public policy considerations demand that Rule 10b-5 be given full effect against these agencies."

While the court cases to date and investigations to date have gone nowhere, there was a recent case (November 5, 2012) in Australia, in which the courts agreed with the plaintiffs against Standard & Poor's (Norris 2012).

In this case, the Federal Court of Australia held S&P liable for the "misleading and deceptive" AAA rating it issued on CPDO (constant proportion debt obligation-- this a very complex structured product) in 2006. The plaintiffs had invested these securities and lost significant sums of money. The court found that S&P's analysis was based on "unfounded and irrationally optimistic assumptions", and that the plaintiffs only invested because the securities were rated AAA. The judge held that where investors are not equipped to do the analysis and are relying on the rating agency, the rating agency owes a duty of care. The court awarded compensation to the plaintiffs. This is the first case in which a CRA has been held liable for ratings that they issued. S&P plans to appeal the court decision. In an appendix to this report, there is a brief discussion of a major legal blow that was struck against the S&P in February 2013.

3.4. Regulatory efforts to Control the Rating Agencies

1. IOSCO Code of Conduct for Credit Rating Agencies

IOSCO (International Organization of Securities Commissions) is an organization consisting of international securities regulators (IOSCO homepage). They are a forum for regulators from countries around the world to discuss and adopt guidelines to help improve the integrity of the securities markets. It was created in 1983, and it claims that its members regulate 95% of the world's securities.

"The member agencies currently assembled together in the International Organization of Securities Commissions have resolved, through its permanent structures:

- to cooperate in developing, implementing and promoting adherence to internationally recognized and consistent standards of regulation, oversight and enforcement in order to protect investors, maintain fair, efficient and transparent markets, and seek to address systemic risks;
- to enhance investor protection and promote investor confidence in the integrity of securities markets, through strengthened information exchange and cooperation in enforcement against misconduct and in supervision of markets and market intermediaries; and
- to exchange information at both global and regional levels on their respective experiences in order to assist the development of markets, strengthen market infrastructure and implement appropriate regulation."

In September 2003, IOSCO published principles regarding the activities of credit rating agencies. Since different jurisdictions have their own nuances to their markets, the principles were high level guidelines, but all designed with the intention of improving protection for investors through transparency. In addition to these Principles, in December 2004, IOSCO, of which the SEC was a member, published a Code of Conduct for credit rating agencies and their analysts. This code was further revised post the crisis, in 2008 (Code of Conduct Fundamentals... 2004: 3-4; Code of Conduct Fundamentals... 2008).

The committee in charge established four over-riding principles (IOSCO Statement of Principles... 2003):

1. Rating actions should reduce information asymmetry.
2. Rating actions should be independent and objective.
3. CRAs should pursue transparency and disclosure.
4. CRAs should maintain in confidence all non-public information.

As part of this effort a Code of Fundamentals was adopted, which prescribed that CRAs needed to have and publish policies which guarded the "quality and integrity of the rating process", the independence of the rating agency, its responsibilities to the investing public and issuers, and its communication with the market.

There is great deal of detail in this code. There are specific recommendations to ensure the principles are fulfilled. Some of the important measure are as follows:

In order to ensure the quality of the rating process, the Code, specifies that the CRA should adopt procedures that lead its rating to be based on a "thorough analysis of all information known to the CRA that is relevant to its analysis according to its published rating methodology." The CRA "should use rating methodologies that are rigorous, systematic, and where possible, result in ratings that can be subjected to some form of objective validation based on historical experience".

"Analysts should apply a given methodology in a consistent manner." "Credit ratings should be assigned by the CRA, and not by any individual analyst", and the "CRA should use people who ... have appropriate knowledge and experience in developing a rating opinion for the type of credit being applied." The emphasis in italics is added, because each of these factors are critical, and are subject to failure, abuse, and manipulation.

There are also requirements for record keeping and record retention, the need to have sufficient resources, avoid misrepresentations, promote continuity, and avoid bias. The code notes that ratings should not be assigned by an individual, but by a committee. The

code suggests that a CRA should "adopt reasonable measures so that the information it uses in assigning a rating is of sufficient quality to support a credible rating", and "if the rating involves a type of financial product presenting limited historical data (such as an innovative financial vehicle), the CRA should make clear, in a prominent place, the limitations of the rating". In the light of this last point, it is hard to explain the lack of such disclosure with the ratings assigned to sub-prime RMBS and CDOs, where there was clearly limited historical data.

There are specific requirements for the ongoing surveillance of ratings. First, a CRA should make sure they have adequate resources- personnel and financial- to monitor and update their ratings on a timely basis. An important rule that tries to address some of the conflicts of interest says that, "The CRA and its employees should not, either implicitly or explicitly, give any assurance or guarantee of a particular rating prior to a rating assessment". Notably, there was some exception carved out for structure finance! Importantly, section C 1.14-1, the code says that a CRA "prohibit its analysts from making proposals or recommendations regarding the design of structured finance products that a CRA rates". This provision was not in the 2004 code, but added later in the revised 2008 version, following the crisis. This addition was a result of accusations made against the CRAs that they helped issuers/bankers design the products that they then went ahead and rated AAA.

The Code calls for a separation of employees engaged in the rating process, and those involved in fee negotiations and the business side of the CRA. Analysts cannot be compensated based on the revenues that the CRA derives from issuers that the analyst rates. There are also securities trading restrictions placed on the analysts and restrictions on receiving gifts from clients. There are guidelines for the dissemination of ratings, and disclosure of when the rating was last updated.

Transparency guidelines were created, which called for disclosure along with rating, the methodologies and assumptions that were used arriving at their ratings. So it is not sufficient simply to publish a rating without a proper explanation. As discussed later, this became a problem with regard to the SEC rule 17g-5 and unsolicited ratings. IOSCO also

suggested that a different rating symbology be adopted for structured finance securities. This was subsequently adopted by the EU, and adopted globally by the CRAs post the crisis.

The Code also required that a CRA indicate the limits to which "it verifies information provided to it by the issuer or originator of a rated security". This is important because many investors and other market participants believed that the CRAs verify the data. But, the CRAs have said they do not rate for fraud. Requirements for publishing ratings performance were adopted, and it was recommended that all CRAs use a standard approach to facilitate comparative performance across rating agencies (Appendix 2).

IOSCO continues to remain active in the area of the credit rating agencies. Just recently, in December 2012, they published a work paper on internal controls and management of conflicts of interest at credit rating agencies (IOSCO/MR/34/2012 2012).

The rating agencies adopted and incorporated many of the ideas of the IOSCO code, into their own code of conduct. For example, in October 2005, Standard & Poor's adopted and published on its website, its own Code of Conduct. In that code, it re-affirmed the objectivity and independence of its ratings. S&P wrote that it fully supports the IOSCO code of conduct, and believes that its code of conduct is consistent with that of IOSCO. S&P updated its Code of Conduct in June 2007.

In section 2.1 of S&P's Code of Conduct they say that S&P, "shall not forbear or refrain from taking rating actions if appropriate, based on the potential effect (economic, political, or otherwise), of the rating action on {S&P}, an issuer, an investor, or other market participant" (Complaint for civil money penalties...). This rule has direct bearing on the outcry of the "pro-cyclicality" of ratings expressed by the governments in Europe. European governments have claimed that rating agency downgrades of sovereign debt, can lead to further deterioration in the financial condition of a country.

In section 2.4, The Code says, that "ratings assigned to an issuer or issue shall not be affected by the existence of, or potential for, a business relationship between S&P, and the

issuer, or any other party, or the non-existence of such a relationship" (*Ibid.* 36). This rule clearly prohibits business considerations having any bearing on ratings, and thus, the criteria on which the ratings are based.

Based on the code, a separation was created between the surveillance analysts and new issue analysts. The separation between new issue and surveillance analysts was adopted because of the apprehension that analysts might be reluctant to downgrade an issuer that they originally rated. It is interesting to note that Mr. Frank Raiter, former Managing Director at Standard & Poor's in structured finance during the crisis years, testified before the US Senate in 2010, that this separation, recommended by IOSCO and implemented by S&P, actually was a major cause in the failure of the ratings. "The final condition contributing to the failure of the rating agencies was the separation of the initial ratings process from the subsequent surveillance of rating performance. While the rating process utilized ever improving models, surveillance operated under their own criteria. At S&P, the manager of surveillance refused to use the rating model in reviewing the performance of outstanding bonds. In fact, the resistance to "re-rating" bonds with each new model came from upper management. The concern was that "re-rating" outstanding deals with new information would significantly increase rating volatility and possibly result in lost revenue."

Another organizational change that was implemented to manage conflict of interest was the separation of bonus pools for the rating analysts and other employees and management was established. Separate bonus pools were meant to insulate analysts from business pressures. For the same reason, only certain designated individuals were permitted to discuss fees with issuers.

The ideas expressed in the IOSCO Code of Conduct were good and addressed some of the processes that could lead to conflicts, but the reality was that they were not able control the actual behavior of the credit rating agencies, and had no penalty mechanism or legal standing by themselves. For example, as said Jacob, D. that at S&P the new issue and surveillance analysts were separated and yet, the RMBS surveillance group was slow to

downgrade bonds that had clearly deteriorated in quality. Moreover, their surveillance staff claimed that they were not given sufficient resources. Many of the ideas in the IOSCO code, both from 2004 and the revised 2008, have been incorporated into the regulations as discussed below.

2. Credit Agency Reform Act of 2006

As discussed earlier, just before the crisis exploded, the US Congress, in September 2006, following its frustration with the slow progress at the SEC, passed the Credit Rating Agency Reform Act (CRA 2006) (Public Law 109–291 109th Congress An Act 2006).

This is the first substantial federal regulation of the credit rating agencies in the USA. Prior to this, the rating agencies were largely unregulated. The purpose of the Act as stated by the Congress was "To improve ratings quality for the protection of investors and in the public interest by fostering accountability, transparency, and competition in the credit rating agency industry".

Congress asserted jurisdiction over the rating agencies by virtue of the fact that their business crosses state lines through the mails, the rated securities trade on national securities exchanges, the securities are purchased by national banks, ratings affect interstate business and the national economy. The Act gave the SEC legal authority that it needed to properly regulate the industry.

In this legislation, Congress specifically states that because of the importance of credit ratings, oversight by government regulation, "serves the compelling interest of investor protection". The legislation notes the pre-dominance of the 2 largest credit rating agencies, Standard & Poor's and Moody's, and therefore, endorses the idea of "additional competition" being "in the public interest " (section 2, (4), (5)).

The Act gave further clarity to the definition of an NRSRO. It requires such an organization to have been doing credit ratings for at least 3 consecutive years. It requires that at least 10 major institutional buyers recognize the organization for its ratings in at least one of the

major fixed income asset classes. New rating agencies claim that this provision is counter to one of the goals of the act, which was to increase competition in the credit rating industry by encouraging the creation of more rating agencies.

Similar to many of the IOSCO guidelines, the Act, requires the NRSRO to provide performance measurement of its credit ratings, its procedures and methodologies for determining credit ratings, policies and procedures to prevent the misuse of material, non-public information, its code of ethics, disclosure and management of conflicts of interest, and a list of the 20 largest issuers that use its services.

Furthermore, the legislation gave the SEC the authority to penalize any NRSRO for violations. The SEC was granted the right to "censure, place limitations on the activities, functions, or operations of, suspend for a period not exceeding 12 months, or revoke the registration of any nationally recognized statistical rating organization, if the Commission finds, on the record after notice and opportunity for hearing, that such censure, placing of limitations, suspension, or revocation is necessary for the protection of investors, and in the public interest.... and that NRSRO or.. associated person committed any act" that violates the provisions of the act, with a 10 year statute of limitations.

Credit rating agencies were prohibited from using coercive tactics to get issuers to use their ratings, or "to modify a credit rating or otherwise depart from its adopted systematic procedures and methodologies in determining credit ratings, based on whether the obligor purchases... the credit rating". The rules also prohibited a policy which became known as "notching", where a rating agency would refuse (or automatically use a lower rating- notch down), to rate a pool of assets in a securitization, if the underlying assets in the securitization only use the rating of another agency (Appendix 2). Other specific prohibited acts and practices included any act related to the issuance of credit ratings that the Commission determines to be unfair or abusive.

Aside from the new specifications to be an NRSRO, and some disclosure and reporting requirements, and the ability to penalize a rating agency, there really were not many specifics that addressed the core conflicts. The regulation focused on process and ideas.

While stating that competition was to be encouraged, no mechanism was set up for this (Appendix 2). Moreover, some of the provisions, especially regarding notching, seemed to re-in force the idea that unsolicited ratings might be viewed as anti-competitive and coercive!

The Act relied on the SEC to promulgate rules based on the ideas of the expressed in the Congressional act. In 2007, as the subprime crisis was unfolding, the SEC, which had authority through the CRA Act of 2006, passed rules 17g-1 through 17g-6 and established its NRSRO oversight program. In January 2011, adopted rule 17g-7. Below is a summary of these rules as described by the SEC (U.S. Securities and Exchange Commission homepage).

3. Exchange Act Rules Applicable to NRSROs

- Rule 17g-1-- registration process for an NRSRO

Requires a credit rating agency to apply for NRSRO status and issue credit ratings for various classes of securities by filing a Form NRSRO with the Commission, and prescribes how an NRSRO must keep its registration up-to- date and file an annual certification. Additionally, an NRSRO must make its current Form NRSRO and information and documents submitted in Exhibits 1 through 9 to Form NRSRO publicly available.

- Rule 17g-2- required records, and record retention by NRSROs

Requires an NRSRO to make and retain certain types of business records and publicly disclose certain ratings history data. The records include a list of the analysts that participated in determine the rating, and the person that approved the rating before it was issued.

Very importantly, in cases where a quantitative model was used to help determine the credit rating, a record of the rationale for any material deviation between the model implied rating and the issued rating must be recorded. It must be recorded whether a rating was solicited by the issuer or unsolicited.

Also, very importantly this rule required a documentation of rating criteria and methodologies. Also, a complete history must be kept of rating actions taken on a security (all subsequent rating changes, up or down). All records of information used in the rating must be retained, as well as all analyst worksheets and work papers. Marketing materials have to be retained, and external and internal communications relating to "initiating, determining, maintaining, monitoring, changing, or withdrawing a credit rating." A record of complaints must be retained. There was a three-year retention period required for all documents under this rule.

- Rule 17g-3- Annual Financial Reports to be provided by NRSROs

Requires an NRSRO to file certain audited and unaudited annual financial reports and reports of the number of credit rating actions with the Commission. Disclosure of how much revenue was derived from ratings versus other activities was required. Disclosure of aggregate compensation to the rating analysts was required. And disclosure of the 20 largest issuers (in terms of fees paid) that used the CRA was required.

- Rule 17g-4. Prevention of misuse of material non-public information

Requires an NRSRO to establish and enforce written policies and procedures designed to address specific areas in which material, non-public information could be inappropriately disclosed or used.

- Rule 17g-5 Conflicts of interest

This rule identifies a series of conflicts of interest arising from the business of determining credit ratings. Some of these conflicts must be disclosed and managed, while others are expressly prohibit. The rule states that "A person within a nationally recognized statistical rating organization is prohibited from having a conflict of interest relating to the issuance or maintenance of a credit rating", unless disclosed and managed properly.

Conflicts of interest for the purposes of this rule include:

- A. Being paid by the issuer to determine credit ratings
- B. Being paid by subscribers for access to ratings
- C. persons employed at the NRSRO having business relationships with rated entities.
- D. persons at the NRSRO own securities of rated entities

Prohibited conflicts include:

- A. NRSO prohibited from Issuing or maintaining a solicited rating for an issuer where the earned fees comprise 10% or more of the CRA's revenues.
- B. The person or committee members issuing the rating and any person responsible for approving the rating, or determine the rating cannot own securities, or is a director in the rated entity
- C. The person negotiating the fee cannot participate in the rating process
- D. The persons determining or responsible for approving ratings cannot receive gifts of more than \$25.

Within this rule is a subset of rules designed to facilitate unsolicited ratings in structured finance, and more importantly to discourage rating shopping. One of the contentions of CRAs is that, in the case of structured finance, is that they are unable to rate a security if they are not hired by the issuer, because the information necessary to perform the rating is not available. In order to encourage unsolicited ratings, and in order to put pressure on issuers who try to avoid ratings from a conservative rating agency, the rule requires that the hired CRA:

1. Maintain a password protected website with a list of each security which lists each security which it is currently in the process of determining an initial credit rating. It must identify when the process was initiated, the type of security, the name of the issuer, and the website of the issuer, sponsor, or underwriter of the security where the information about the security being rated can be found and accessed.
2. Must provide free and unlimited access to any other NRSRO.

3. Must obtain representation from the issuer that can reasonably be relied on, that the issuer maintains on its own website set up for this purpose, and available to other NRSROs, information about the security that can be relied on to determine or monitor a credit rating on the security. And post to this website all information that it has provided to the hired CRA, both for the initial rating and for subsequent surveillance.

If a CRA accesses the issuers website for this information, it must do so with intention of issuing an unsolicited rating, and it must issue an unsolicited rating for at least 10% of the issued securities for which it accessed information within any calendar year. This was a very strong and unprecedented regulation, however, as discussed below, it has not, to-date had the desired effect of the issuance of unsolicited ratings, which would discourage rating shopping.

- Rule 17g-6 Prohibited acts and practices.

Prohibits NRSROs from engaging in certain unfair, abusive, or coercive practices. The prohibited practices include the following:

- A. Conditioning the issuance of a credit rating of a credit rating on the purchase by an issuer of other products or services of the CRA.
- B. Issuing or threatening to issue or modify a credit rating not in accordance with established criteria, unless another product is purchased.
- C. Notching down another NRSROs ratings in a structured finance transaction.

- Rule 17g-7 Report of representations (reps) and warranties

Requires NRSROs to include information regarding the representations, warranties, and enforcement mechanisms available to investors in an asset- backed securities offering in any report accompanying a credit rating issued in connection with such offering, including a preliminary credit rating, as well as how those representations, warranties, and enforcement mechanisms differ from those in similar offerings.

4. The Dodd-Frank Act -- "Wall Street Reform and Consumer Protection Act of 2010"

In July 2010, as a result of the financial collapse, the US Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), which amended and added to CRA 2006. This Act of Congress (848 pages long), was not just directed at the rating agencies, but was far reaching comprehensive financial regulatory reform, which touched almost every aspect of the financial markets (One Hundred Eleventh 2010).

This thesis focuses only on Title IX, subtitle C- "Improvements to the Regulations of Credit Rating Agencies", sections 931-939H (Appendix 5).

The main focus of Dodd-Frank as it applied to the rating agencies were around increased liability, increased disclosure, enhanced governance, prohibited activities, conflicts of interest, and oversight. The Dodd-Frank Act extended many of the provisions in CRA 2006, but also added new ones. The most important addition was the requirement to remove references to credit ratings in the Securities Exchange Acts, and other statutes. And, it required all federal agencies, like the SEC, the Federal Reserve to remove references to ratings from their own regulations, in assessing credit risk. Finally the government recognized its past mistake and the damaging effects of elevating the ratings to almost a government endorsement.

Other important provisions gave increased authority to penalize CRAs, and their individual employees. The SEC was granted authority to impose fines for failure of the firm to supervise its employees (Dodd-Frank regulation, cited through La Malfa 2011). Also, a new "look-back" rule was adopted (2012 Summary Report of Commission... 2012: 4). This requires rating agencies to check and report on employees who left the CRA and went to work for a firm they rated. Rules were adopted to strengthen corporate governance and the independence of the board of directors. Finally, the legislation created an Office of Credit Ratings within the SEC, charged with conducting annual examinations of the NRSROs.

Another area of focus of the Act was increasing the potential liability for CRAs, by lowering the bar for them to be held accountable. The law eliminated the exemption

provided by rule 436(g) under then SEC 1933 Act. This exemption allowed ratings to be used in a prospectus without the consent of the rating agencies. By eliminating this exemption, and requiring rating agency consent, rating agencies could be held to the standard of an expert. This likely would hurt their ability to defend themselves using the "freedom of speech" right guaranteed under the first amendment. This would open the CRAs to similar enforcement and penalty provisions as public accounting firms and securities analysts.

5. Summary of European Regulatory Efforts

Although the financial crisis and the rating agencies' role was centered in the USA, its effects were felt globally. Many banks bought securities that were based on US RMBS. And regulators in Europe gave special regulatory capital relief to securities with high credit ratings. Moreover, European governments are very sensitive to the power of the rating agencies as they can, through a rating downgrade, cause a country's cost of borrowing to rise, sometimes significantly. In recognition of this power and role, European regulators through ESMA has been studying regulation of CRAs, making suggestions, and implementing some changes (Appendix 2). It is interesting that sometimes regulations adopted in other jurisdictions can impact rating agency behavior on a global basis. For example, the European regulators decided to require a special symbol for ratings for SF products (S&P To Add Symbol... 2010). Because, securities are sold all over the world, the rating agencies decided to use it in all jurisdictions.

In Appendix 6 is a table of the efforts over the last 10 years made by the EU to address the credit rating agencies. There was certainly unhappiness and concern about the rating agencies in Europe following the financial crisis, as can be seen above in all the regulatory activity. But, the anger came more from their sovereign rating actions than structured finance. Securitization is much smaller in Europe than in the USA. However, many Europeans object to the power that the three US-based CRAs wield over their countries cost of borrowing. They blame the CRAs for exacerbating the European Sovereign crisis, with the downgrades of Greece, Spain, Italy, and the credit watch of others. As in the USA

regulations were adopted to increase transparency, accountability, liability, and increased competition for the CRAs. Some proposed the establishment of a European credit rating agency, and forbidding unsolicited ratings. It is worth noting that in Europe, the allegation is that the USA CRAs are assigning ratings that are too low to sovereign debt, whereas in the USA, in structured finance, they were accused of giving ratings that are too high.

As with Dodd-Frank, there is the idea of attempting to reduce the over-reliance of institutions on external credit ratings, but the regulations did not go as far as the USA, because they do not yet require the removal of references to credit ratings in the regulations. The Europeans recognized that at this point there is still no good alternative. And, the effort to create a European-based CRA failed, as it really would not address the fundamental issues.

The next section turns to a discussion of the main point of this thesis. How have each of these rules changed rating agency behaviors, and will they help avert another rating agency failure. The impact of each of the major regulatory efforts are discussed , and in the following section a view of the future and possible remedies is presented.

3.5. Regulations and Reforms continue to fail- the evidence

It is very difficult at this point in time to prove, whether or not the most recent regulations imposed following the 2007 financial crisis, by the Dodd-Frank Act will have the desired effect of controlling the Credit Rating Agencies. Ultimately, this may not be known until the next financial crisis occurs. But, on balance, weighing the limited evidence, it appears that none of the regulations that have been passed, nor the reforms that have been implemented have made any fundamental changes in the framework within which the CRAs operate. None of these regulations have addressed the core issue of ensuring the quality, independence, integrity, and comparability of credit ratings. It appears that some of the bad behaviors, such as rating shopping/catering are continuing. And, to-date the regulations have had very limited ability in holding the CRAs accountable.

Examining the stock prices of McGraw Hill (which owns S&P) and Moody's, it can be seen that the stock prices have nearly completely recovered from their steep fall during the crisis. McGraw Hill stock (ticker MGH), which rose from the mid \$30 to over \$70, in mid 2007, and then plunged to the low teens, is now (as of the end of January 2013) close to \$60 per share. CDOs are being issued again, and CMBS issuance reached \$50 billion in 2012, up from zero in 2009. While this still small relative to the over \$200 billion issued in 2007. So, it appears, (at least, until February 4, when the US Department of Justice launched a major legal action against S&P - see Appendix 1), that the CRAs have escaped untouched, once again, from this most recent, devastating financial crisis, in which they played a central role (Figure 5).



Figure 5. Chart of McGraw hill stock price (Source: Bloomberg).

So, the question is how can we tell if anything has changed? The approach taken here is to examine some of the guidelines, reforms, and regulations imposed by, IOSCO, the CRA Reform Act of 2006, and some of the rules required under the Dodd-Frank Act, and look

for evidence about where they are working and not working. And, in cases, where it is still too early to tell, the probable outcome is inferred based on what has already happened.

Early in the history of the rating agencies and even until today, some believed that the rating agencies can regulate themselves, due to their own self-interest (Champsaur 2005: 6). The idea is that since their good reputation is important for their business, they would not risk hurting their reputation by performing sloppy, reckless, or fraudulent analysis. The theory that the fear of loss of “reputational capital” makes some sense, as Partnoy suggests, but only in a free market. However, since the CRAs were given NRSRO status, they were no longer concerned about the quality of their ratings, since market participants have no alternative. Following the failures of the CRAs in the spectacular faulty rating of Enron, the market continued to use credit ratings. And, following the most recent financial debacle, where \$ trillions of dollars of value was lost, the market continues to use ratings. Dodd-Frank’s removal of ratings from Federal regulations, has not been sufficient, in removing the certification role of CRAs, because they are still used by insurance regulators (Hunt) and in many investment guidelines. So, it is difficult to argue that reputational risk will lead to self-discipline of the credit rating agencies.

Even though the Sarbanes-Oxley Act of 2002 was strong regulation to combat corporate fraud, and poor behavior by the big accounting/audit firms, the rating agencies remained unregulated following Enron. The Code of Conduct written by IOSCO in 2004, was adopted by the big 3 CRAs, as discussed in the prior section. While the ideas and ideals of the Code of Conduct were very positive, they were not sufficient to prevent the bad behavior of the rating agencies that ensued in the years leading up to the crisis. The management of conflicts of interest, the quality and the integrity of the rating process that were codified by IOSCO, just seemed to be ignored by the rating agencies that adopted them. Ratings shopping/catering was rampant. The changing of models to accommodate issuers and poor quality analysis characterized the rating agencies’ behavior in the years 2004-2007, in structured finance. Perhaps the rating agencies did not take the IOSCO code seriously, because there was no one to enforce them, and no penalties for violation of this code.

Regarding the CRA Reform Act of 2006 it is possible to argue that it was ineffective because it was too late to prevent the financial crisis of 2007, since the crisis was already in motion and unfolding and could not be stopped. Nevertheless, it is clear that CRA 2006, while giving authority to the SEC to impose penalties on the CRAs, lacked specificity to hold the rating agencies accountable. The new law focused on further definition of an NRSRO and the registration process to become an NRSRO. It neither removed the power of CRAs to grant “regulatory licenses”, as suggested by Partnoy nor did it sufficiently address the conflict of interest inherent in the issuer-pay model, as suggested by Coffee. Moreover, it re-enforced the independence of the analytic process and criteria used by the CRAs in determining ratings. Despite the new regulations imposed by CRA 2006, the worst financial crisis since the Great Depression of 1929, hit with fury in 2007, and continued for several years. And, the CRAs, who were supposedly now subject to regulation by the SEC, were at the center of the storm.

One of the goals of CRA 2006, was to encourage competition within the CRA industry. The thought was that with more CRAs, the power of the big 3 CRAs would be reduced. New credit rating agencies did start, but they have remained a very small factor in the market as discussed in Section 1.1. There was, and there remains very little reason to use the smaller CRAs. So, in this regard, CRA 2006 also failed. Moreover, by further defining the requirements in CRA 2006 for NRSRO certification the government re-enforced their special status. As noted in the beginning of this report, this government "endorsement" remained at the root of the problem. The legislation also failed to understand the dynamics of rating shopping. The easiest way for a new rating agency to get business was and remains for it to lower its standards.

As discussed in Section 3.3., until very recently, 5 years after the financial crisis, the government and private institutions worldwide have been unable to hold the rating agencies accountable for their actions during that time period using either IOSCO guidelines or the provisions of CRA 2006. The CRAs have been able to get courts to agree to their position on their protection under the "freedom of speech" guaranteed by First Amendment, and

other legal defenses. Or at least, the courts have agreed that there was not sufficient proof of violation of regulations by the CRAs.

A good example of this is a case cited by Senator Levin in the senate hearings, in 2010. This case was about a CDO called, Vertical ABS CDO 2007-1. In early 2007, UBS, which is a major bank, asked S&P and Moody's to rate this CDO. The UBS banker, however, failed to cooperate with the analysts. One S&P analyst wrote in an email to colleagues: "Don't see why we have to tolerate lack of cooperation. Deal is likely not to perform." Despite the analyst's judgment that the CDO was unlikely to perform, S&P rated it. So did Moody's. In April 2007, both agencies gave AAA ratings to the CDO's top 4 tranches. Six months later, both agencies downgraded the CDO which later collapsed. One of the purchasers, a hedge fund called Pursuit Partners, sued over the CDO's quick demise. S&P and Moody's were dropped from the lawsuit since *current law* does not authorize private lawsuits against them even for reckless or unreasonable ratings, but the court ordered UBS to set aside \$35 million for a possible award to the investor. The legal pleadings included internal emails at UBS referring to the supposedly investment-grade Vertical securities as "crap" at the same time the bank was selling them (Childs 2013).

New investigations continue to be started (Eaglesham, Neumann and Perez 2013). However, none have resulted in any significant action against the rating agencies. This is all strong evidence, that at least, the IOSCO guidelines, and the CRA Reform Act of 2006, both of which were in place before the crisis, did not create a framework, that could hold the rating agencies accountable.

As discussed, following CRA 2006, the market collapse occurred. Many financial institutions were severely crippled, and Congressional hearings were held, resulting in the Dodd Frank Act. How are the provisions of the Dodd-Frank Act and the rules adopted by SEC affecting the credit rating agencies? In a 2011 research report, by Claire Hill, from the University of Minnesota Law School, the author argues that "while Dodd-Frank's rating agency reforms are not bad, they are also not particularly good. They do not sufficiently address the core reasons why rating agencies gave such inflated ratings to subprime

securities or why the agencies so grievously mis-rated other instruments, including Enron debt” (Hill 2011).

One measure of success or failure of the regulations is how the rating agencies have been behaving *since* the enactment of Dodd-Frank. Unfortunately, the report card is not good. Rating shopping and criteria competition continues. Recently hired senior staff that was brought-in, in the wake of the crisis, to change the firm's culture and procedures have been terminated. There continues to be heavy reliance on credit ratings. Each of these is now discussed.

The new issue CMBS market began to recover in 2010 and 2011, however as a result of the CMBS criteria changes that S&P made in 2009, its share of ratings, began to decline. Towards the end of 2011, a new manager for CMBS was brought in, ratings criteria were relaxed, and S&P began to get new rating assignments at the expense of Moody's (Mulholland, Faux 2012).

In an October 5, 2012 Reuter's newstory, S&P was criticized for trying to “buy” market share by weakening its criteria "(This) just screams to me that they have to buy market share," said Nilesh Patel, a managing director at Prima Capital Advisors, an investment firm specializing in high-quality CMBS” (Tempkin 2012).

In article in the Wall Street Journal on August 4, 2012, an analyst was quoted as saying, "that granting such leeway to analysts allows wiggle room that could result in more favorable ratings on forthcoming deals". Furthermore, the article noted that "Market participants say they have been waiting for S&P to unveil its new rating standards. The absence of S&P in the CMBS market has allowed smaller rating firms to expand their market share, including Kroll Bond Rating Agency Inc. and Morningstar Credit Ratings LLC. Moody's MCO -2.02% has dominated the sector. Others expressed hope that S&P would more aggressively address 2009 rating model changes that resulted in harsh downgrades and widened the gap between S&P and other rating firms” (Yoon, Neumann 2012). All of these examples, support the view that rating shopping and rating catering is still happening.

Another measure of how it appears that the rating agencies are reverting to their old behavior is by considering their senior management staffing decisions. Following the crisis, McGraw Hill replaced the senior staff at S&P, including a new President, a Chief Credit Officer, a new Head of Quality, a new Head of Compliance, and a New Head for its Structured Finance businesses. It fired the most senior heads of structured finance, and disempowered, but kept on staff its former heads of credit, and structured finance. Beginning in late 2012, S&P began undoing these hires, it replaced then President, the Chief Credit Officer, its Head of Structured Finance, its Head of Compliance, and its Head of Quality (Mark Adelson, Hired... 2012; Credit-Rating Gadfly... 2012).

"He had a much higher standard for each rating category than people wanted," David Jacob, a former S&P executive who is a friend of Mr. Adelson's and joined the firm shortly after him. "In the end, it didn't fit the business strategy of the firm." (Wall Street Journal August 29, 2012). Following these departures S&P promoted senior staff who had been responsible for ratings during the time of the crisis (Faux 2012).

Dodd-Frank Act, section 939A, required Federal agencies to review all regulations that require the use of credit ratings, and remove these requirements, and instead replace this with alternative criteria. The SEC has made some progress on this. In its December 2012 report to Congress on assigned Credit Ratings, the SEC reported on its request for comment from the public on the effectiveness that removing credit ratings from regulation would have in mitigating conflicts of interest such as rating shopping. Interestingly, even the CRAs could not agree on this (Report to Congress... 2012).

The SEC itself noted that credit ratings are used in many areas outside its jurisdiction and purview. For example, they are used in investment guidelines and private contracts. As noted earlier they continue to be used by the NAIC, and internationally by banking institutions. So, it would appear that thus far, the regulations have not been able to reduce the reliance on credit ratings.

One major failure of the regulation was the attempt by the SEC with rule 17g-5 to discourage rating shopping by encouraging unsolicited ratings. Typically, unsolicited

ratings would be lower than solicited ratings, and that is why the issuer did not hire the CRA with stricter criteria. It is possible, that unsolicited rating might be higher. This would occur when a new CRA, with less of reputation, might be trying to get future business. There have been no unsolicited ratings issued since that rule was created.

David Jacob, former Head of Global Structured Finance at S&P describes why this regulation has failed (transcript of discussions with David Jacob). Under rule 17g-5, all the information that was supplied to the hired NRSRO was made available via a website to all other NRSRO. So, in theory, with this information, any non-hired NRSRO could issue an unsolicited rating. Unfortunately, the issuers did not give permission to the non-hired NRSROs to publish any of the information that they obtained from the website. This would mean that the non-hired NRSRO could publish a rating, but the rationale for the rating. This, was, obviously not helpful, and in fact against the IOSCO guidelines! Moreover, the non-hired NRSRO might have different data requirements, so it might not even be able to get the information it needs to rate the transaction. So, while the intentions of the SEC were good, the rule was poorly designed.

In response to this, S&P introduced the idea of an unsolicited commentary. For situations where they were not hired, but believed that their ratings might be substantially different from the ones of the hired CRA. This was not a rating, but just a discussion of the pros and cons of the transaction. While these were well received by many investors, there were some significant problems. First, all information had to come from public sources, since the SEC permitted access to the website only if the non-hired NRSRO was intending to use the information for issuing an unsolicited rating. Second, it was very difficult to get the unsolicited commentary published before the debt was issued, because the public information was so limited. Publishing a negative commentary after the deal was done would hurt investors who purchased the bonds, because this hurts the value of their securities by implying that the original rating was not good.

In a deal that S&P was hired to rate, instead of Moody's, Moody's published a critical commentary on S&P's analysis (Gaffney 2012). This is actually good news. It shows that

other competing CRAs are following S&P's lead to dispute another CRAs' rating quality. While falling short of issuing an unsolicited rating, the commentary is based on a disagreement about the quality of the S&P rating. The question remains whether or not this good behavior will continue. In order for this to happen, investors need to embrace this. However, investor support is not enough. Regulation 17g-5 needs to be fixed, and the informational requirements of regulation AB 2 need to be implemented.

In their December 2012 report to Congress on Assigned Credit Ratings, the SEC staff acknowledged these shortcomings, but nothing has been done to fix this.

Many proposals rejected, or not yet implemented

1. SEC staff fails to reach conclusion on new CRA business model

In their 81 page December 2012 Report, the SEC staff, as required by Section 939F of Dodd-Frank, reported on the feasibility of establishing a government board that would assign which rating agency would rate each deal. The idea with this approach was to eliminate rating shopping completely. In this report reviewed the pros and cons of various alternative business models. In the end, the staff proposed nothing and left things unchanged.

2. Europe gives up on idea of its own rating agency

Since the big 3 ratings agencies were US-based, it is believed by some to be US-centric in its approach to credit ratings. An idea that has been discussed in Europe was for the EU to establish its own CRA. This idea was turned down in the most recent regulatory pronouncements.

"The Commission did not propose to set up a European Credit rating agency. An analysis showed that setting up a credit rating agency with public money would be costly (ca. €300-500 million over a period of five years), could raise concerns regarding the CRA's credibility especially if a publicly funded CRA would rate the Member States which finances the CRA, and put private CRAs at a comparative disadvantage. However, as part

of this agreement, the Commission will analyze the situation in the rating market and report to the European Parliament on the feasibility of creditworthiness assessments of sovereign debt of EU Member States, a European credit rating agency dedicated to assessing the creditworthiness of Member States' sovereign debt and/or a European Credit Rating Foundation for all other ratings” (New rules on credit rating agencies... 2013).

3. Failure of repeal of reg 436

One of the provisions of the Dodd-Frank Act, was the repeal of a rule (Rule 436 (g)) that had exempted the CRAs from being designated as "experts. This was an attempt by Congress to increase rating agency liability. As "experts" the CRAs could be held liable for material misstatements or omissions in connection with the ratings that they assign. Congress was trying to weaken the CRA First Amendment defense. By the ratings being included in the official registration documents (prospectus) of new bonds, the CRAs would become liable as experts, and they could no longer say, their ratings were just opinions. The CRAs responded by refusing to grant permission for issuers to use their ratings in the prospectus. So, this made this rule irrelevant!

The problem for the market was that the SEC requires the disclosure of credit ratings, because they consider rating material information to the risk of the security. This problem actually caused the ABS market to come to a halt in July 2010. Ford Motor tried to bring a securitization to the market and could not do it, because the CRAs would not allow the use of their ratings in the prospectus, to avoid the "expert" designation and its associated liability. As it turned out Ford turned to the SEC, and the SEC granted an exemption of its requirement that the rating be disclosed in the prospectus (Response of the Office... 2010). That exemption has been continuing since that time and is available to all issuers. So the issue was never resolved. Companies can mention the ratings without rating agency consent, as part of the risk factors of a security. Thus, the CRAs escaped the potential liability that would come from being included in the prospectus as "experts" (Aguilar 2010).

4. Proposed Revisions to SEC Regulation AB still not implemented

One of the central ideas of the SEC in its regulatory approach is disclosure of information. Proper disclosure would enable investors to do their own analysis and not have to rely on the CRAs. Indeed, this is a goal of the Dodd-Frank Act. Investors currently do not get all the information and data that is made available by the issuer to the CRA that it hires to rate its bonds. On January 7, 2005, the SEC adopted a rule which covered the offering process for securities, and new disclosure requirements (American Securitization Forum.. 2012). The data requirement included disclosing detailed information about the loans in the pool in an asset-backed security. The information was to be disclosed as average credit and performance characteristics of the loans in the pool.

"The regulation recognizes that in an ABS transaction, investors view information about the asset portfolio and the distribution of proceeds as material because performance of those assets will dictate the performance of the ABS. Regulation AB thus focuses on the underlying assets, and sets forth in great detail the disclosures required in offering documents for asset-backed securities, including (The Role of Reg AB 2010):

1. The title and type of securities being offered.
2. A summary of the flow of funds.
3. Statements detailing servicer or other fees.
4. Detailed descriptions of the characteristics of the assets, and
5. Description of any credit enhancement features."

On April 7, 2010, the SEC proposed substantial revisions to Regulation AB, known as Reg AB II (SEC Proposes Substantial... 2010). One of the important features was the requirement to provide individual loan information. The SEC realized that this is important, because average pool characteristics can mask the risk of very poor quality loans. A pool with high quality and low quality loans will show as an average quality pool. But, what in practice, the poor quality loans will have worse performance than the average. The proposal also requires reporting of ongoing information reporting of the loan pool's characteristics, so that investors would be aware of any changes.

One of the problems that was identified during the crisis was that investors had very little time to analyze a new deal, and so they relied in the CRAs. The proposal requires that there be at least 5 business days for investors to review the offering material.

Another important feature of Reg AB II, was the idea of risk retention. This was also part of the Dodd-Frank Act. The idea here is to require the originator of the asset-backed deal to retain a portion of the securities, that were being offered for sale. In this way, by retaining some of the risk they would have an incentive to avoid reckless risk.

While these proposals are not directed at the CRAs, they would certainly help investors. Unfortunately, only a small portion of the proposals have been adopted thus far (Issuer review of assets... 2011). The SEC has received comments back from the public, but important parts of the proposal are still being discussed.

Some positive changes were made and some success

The IOSCO guidelines and the CRA 2006 Act were not entirely worthless. They did lead to changes in the processes within the CRAs, organizational changes to manage conflicts of interest, and a heightened awareness within the rating agencies that they were now regulated. CRAs did separate their new issue rating staff from the surveillance staff, and their business people from the credit analysts. Documentation of rating criteria is now extensively available, reporting and restrictions of employee securities holdings are in place as is supervision of emails. Ratings performance information is published as well as definitions of the ratings.

The CRAs reputations were severely damaged, and lawsuits and investigations were in process. The CRAs reacted by trying to make further changes and work with regulators and legislators to try minimize the damage, without admitting guilt.

S&P, for example, hired a whole new management team. They hired a new President, Deven Sharma, a new Head to Structured Finance, David Jacob, a new Chief Credit Officer, Mark Adelson (both Adelson and Jacob had been critical of the rating agencies

during the crisis), a Chief Quality Officer, Neri Bukspan, and a new Head of Compliance, David Lebowitz. Unfortunately, as described above, this entire team was terminated between the end of 2011 and mid 2012.

There has been some success in encouraging new rating agencies and alternatives to CRAs. For example in CMBS, Kroll Ratings has rated many of the new transactions in 2012. However, the new rating agencies still rate a very small portion of new securities. The National Association of Insurance Commissioners (NAIC), decided to bypass the CRAs, for structured finance ratings by hiring Blackrock and PIMCO, to provide risk measures for CMBS and RMBS, respectively. But this was only for older transactions. These organizations are not in a position to rate new securities, and investors outside the insurance industry do not recognize these risk measures (NAIC to produce... 2009).

In section 933 of the Dodd-Frank Act, the government changed the standard for actions brought against the CRAs, under securities laws. Under the new law, it is now sufficient for a complainant to show that the CRA, knowingly or recklessly failed to conduct a reasonable investigation, or failed to obtain reasonable verification that an independent third party conducted an investigation of the facts about a deal that it rated. It remains to be seen if this new regulation will help in a courtroom (Dodd-Frank Wrinkle... 2010).

The SEC has used its new powers to sanction a CRA. In January 2013, the SEC imposed penalties on the credit rating agency, Egan-Jones. This demonstrates the new power of the SEC, and their intention to use it. In this ruling, they prohibited Egan-Jones from rating any asset-backed securities for the next 18 months (Viswanatha, Bases 2013). This is first, and only, rating agency that has been penalized since the SEC has taken over responsibility for the CRAs. The rating agency also had to pay a fine. Critics of the SEC, point out that this is really just for show. Egan-Jones is a very small rating agency. Critics claim that the SEC would not do this to one of the big 3. Of course, that's hard to prove. It is true, that as has been pointed out, none of the big 3 have been penalized or lost a court case yet, (except as discussed, the case in Australia, which is being appealed (S&P loses landmark... 2012).

Moreover, and shockingly, the fine that was imposed in the Egan-Jones case was only \$30,000!

As part of their new regulatory authority the SEC and ESMA conduct annual examinations and they publish annual reports on CRAs. Thus far, the SEC has published 2 reports, covering mid-2009 to mid-2010, and mid 2010 through September 2011. In their examinations they review procedures, ratings, internal controls, etc. and then in their reports discuss how the CRA responded to previous recommendations, and then the SEC, summarizes its findings and makes new recommendations.

\$5 billion US government February 2013 lawsuit against S&P

The recent lawsuit filed by the US government (described in more detail Appendix 1), demonstrates clearly, that none of the regulations that have been passed to regulate the CRAs have been effective in holding the CRAs accountable. Instead of relying on rules from CRA 2006 or the Dodd-Frank Act, the Department of Justice (DOJ) based its lawsuit on rules from a regulation known as FIRREA. This rule regulates business dealings with banks. The claim by the government is that S&P misrepresented its ratings product in its dealing with the banks. The suit alleges that S&P's claim that the analytics underlying their ratings are independent of business considerations is false. Note the suit does not say that using business considerations to set criteria is illegal, but rather that the CRA misrepresented what the ratings are.

Following the DOJ lawsuit a number of states filed their own lawsuits based on fraudulent representation. They went further than the DOJ, and allege that the CRAs are continuing to mis-represent their product

AUTHOR'S ANALYSIS & DISCUSSION OF POTENTIAL SOLUTIONS

In the prior section it has been shown that the regulations and guidelines continue to fail to control the CRAs. In this final section some of the recommendations made by academics, legislators, regulators, and other experts are discussed. And, the author's ideas are presented.

There are two main avenues that can be pursued to solve the CRA problem, as discussed in section 2.4. One is to reduce or eliminate the use of credit ratings. The other is to improve, the quality of the ratings and regulate the CRAs. Each approach has its pluses and minuses. And, within each approach, there are different ways to accomplish the goal. Also, it is possible, that there are elements from both approaches that can create a better system.

Remove regulatory requirement of using credit ratings

It is quite clear from what has happened that the regulatory requirement of the use of credit ratings, gives the CRAs little incentive to provide high quality ratings. Moreover, because they are non-government institutions, whose motivation is profit, they have a strong incentive to increase their market share by making issuers happy. The removal of the regulatory requirement to use credit ratings, likely lessens the demand for ratings. Since the Enron crisis, many (e.g. Partnoy) have advocated, fixing the problems, by reducing the importance and reliance on then CRAs. As discussed the regulators created the problem by making financial institutions use the ratings, and, now, through the Dodd-Frank Act, they are trying to reverse this. Europeans feel the same way, but are moving more carefully in examining the issue. The idea is that without regulatory recognition or special status,

investors would only use credit ratings if they really helped them evaluate risk. This would lead to better quality ratings and the demise of ratings that perform poorly.

Thus far, there are no good substitutes to the credit ratings

While it seems appealing to simply remove all regulatory references to externally assigned credit ratings, there are several problems with this. First, no one has been able to come up with an alternative to credit ratings for use in risk management guidelines and regulatory applications, that can be used across institutions (e.g. Coffee). While an individual institution can do its own risk assessment, it would be hard for regulators to be able to regulate using an institution's own risk assessments. Surely, these could be biased and are not independent, and would be different at each institution for the same security. In fact, as discussed, the insurance industry continues to use the ratings, and the Federal government cannot force them to stop, since the companies are regulated by the States. Others (as noted by Hunt) continue to use the ratings, and the Federal government has no legal right to prevent their use. They can only, eliminate their use in their own regulations!

Let the government create or define the credit rating criteria

The independent credit rating agencies each create a standard for risk measurement and risk management. The problem is that the ratings provided by each agency, even if done with careful and high quality analysis, may not be comparable to the risk assessment provided by another CRA. Aside from the problem the regulators would have, investors would have difficulty comparing bonds. This would inhibit trading of bonds.

Until now, especially in the USA, the government has held the view that the methodologies of the CRAs should be independent. The government has held back from trying to get involved in the analytic process. This has enabled the CRAs to define credit ratings anyway they want to. This has left the CRAs open to the conflicts of interest, as discussed. A possible solution, would be for the government to define, the characteristics of each rating category. For example, the government could require a AAA has to have a certain expected default rate. Or a AAA, would have to be able to survive certain pre-specified economic

stresses. And then require all regulated rating agencies to adhere to this standard. Their methodologies could be different and proprietary, but, the definition of the ratings would be standard. In fact, Mr. Eric Kolchinsky, a former Managing Director, at Moody's in testimony before the US Senate, advocated something like this. "The only way to prevent this from occurring is to recognize that the function, which the rating agencies perform is a quasi-regulatory one, much like accountants. A single set of public standards needs to be implemented, to be used for regulatory purposes only. This will allow rating agencies to compete for clients without being forced to lower credit standards" (Kolchinsky 2010).

Data Availability

Another problem that occurs, by expecting each institution to do its own risk assessment is that, currently, especially in structured finance, the data may not be available to investors. As discussed in Section 3.5, Reg AB II, is still not fully implemented.

It would seem that the government could require all relevant information necessary to make a risk assessment, be publicly available. The problem is that while investors and regulators may like this, borrowers and issuers do not! But, that is the point. If a company wants to borrow money through publicly issued and registered securities, the author's view is that the company should be willing to make its data public. Otherwise it should go borrow from a bank!

Private CRAs versus Government operated CRA- positives and negatives

Currently, all the CRAs are in the private sector. Some have proposed creating a completely government operated credit rating agency (Bofinger) The government could require all publicly offered securities be rated by this organization. This would be similar to drugs needing the approval of the FDA (the Federal Drug Administration), before a drug can be sold to the public.

The government could require that all bonds that are sold to the public receive a credit rating from this organization. Under this framework, since there is no profit or market

share incentive, standards would not be lowered in order to get business. The often cited conflict of interest of the issuer-pay model would be completely eliminated under this approach. There would be no such thing as rating shopping, if there was only one CRA operated by the government.

Although, this approach does not have to eliminate private CRAs from co-existing with a government operated CRA, it is likely that their role would be greatly reduced. The private CRA will only be used if they provide true informational and monitoring value. Their certification role would be eliminated.

However, there are problems with creating a government operated CRA. First, since these ratings would be required, it is possible that the analysts would not have an incentive to provide high quality work. There would be no aspiration for quality or fear of loss of reputation. Second, how could a government agency assign ratings to its own government's bonds? There would be a tremendous conflict of interest. Moreover, it is easy to see that there would be political difficulties with one country's government CRA rating and downgrading the bonds of another country's debt. Third, could the government attract high quality analysts, with government pay scale? Fourth, one of the big issues with private CRAs was the issue of liability. If the government operated the CRA, would the government be held liable for an error? This is possible, but it is unlikely to ensure high quality CRAs. All that can be expected is unbiased ratings.

The cost of operating a CRA is very high. Presumably, the cost for this government agency could be charged somehow to the industry, because average citizens may not support the idea, if it has to be paid for by general taxes.

Keep the main elements of the current framework, but improve regulation

Instead of abolishing the CRAs, or creating a government operated CRA, the other path is to keep the current system of ratings, but try approaches to improve the ratings and eliminate the bad behavior. Clearly the current system of rating agencies lowering their standards, to compete for market share, does not lead to high quality, meaningful ratings.

As discussed in Section 3.5., the regulations to-date have not been able to change the behavior in the market place that led to the financial crisis. It is possible, though, that more can be done, if the legislators and the courts can stand up to the pressures of the CRAs and others against real reform. In the author's view there are several steps that can be taken to improve the current situation.

a) Limit the number of CRAs, but require that they assign ratings to all bonds

Instead of creating a government owned and run credit rating agency, the government could completely reverse what it has done. It could license only 2 or 3 NRSROs, but require that they all rate all securities. This would eliminate the motive to compete for market share, by lowering standards. The companies would be free to express their views independently. In order, to remove the problem of monopoly pricing, the government could set the pricing and rate of return, the companies could earn, just as they do for public utilities. In order to keep the quality high, they could evaluate rating performance, periodically, and penalize poor performers. It is the author's view that having many NRSROs and having them compete, has only led to a deterioration/weakening in rating criteria.

This is a variation of the so called "Frankin amendment" to the Dodd-Frank Act (Credit Rating Agency Reform 2010). In that proposal, Senator Al Franken, advocated that the government create a Board of Directors, that would select the rating agency to be assigned to rate each deal. The fee would be set by government, and the chosen CRA would have to rate the deal. The issuer would be free to also use another CRA, in addition to the government selected one. Again, with this approach, there would be less motivation, to lower standards. The proposal did not make it through Congress. Instead it was agreed that, the issue would be studied further. It was studied further by the SEC, but not adopted. A report on this by the SEC was released in late 2012 (NYT and WAPO... 2013; Report to Congress... 2012).

The author proposes another potential idea where the government can reduce the rating shopping problem, but at a lower cost to the market than the alternatives. The author suggests that the government could randomly choose deals for which an issuer chose to use

one CRA because of its weak criteria, but avoided using another CRA with more strict criteria. (classic rating shopping). It could then require the non-hired CRA to rate the transaction. The issuer could still be required to pay the non-hired CRA. Since issuers would know that the government could do this with any deal, they would be wary of trying to go rating shopping. Under this approach, not every deal would get an unsolicited ratings only randomly chosen ones. Alternatively, instead of being randomly chosen, the government could select deals based on their analysis that an issuer engaged in rating shopping, but this would require government to perform an analysis, whereas the random approach is less costly.

b) Hold individuals accountable with severe penalties for violations

Another improvement to the current framework, could be making it easier to sue the CRAs and an increase in the penalties for non-compliance. Moreover, it is important to hold individuals accountable not just the companies. Thus far, the rating agencies have escaped most liability, and no individuals has been held accountable. The lowering of the bar for liability, by the Dodd-Frank Act should help. Moreover, the recent Department of Justice and State lawsuits could help discipline the industry, if the government is successful. The DOJ named some individuals in its lawsuit. But, still has not sued them personally. Similarly, thus far, the SEC has also not gone after individuals in the CRAs. If the individuals in the management of the CRAs had the potential for receiving large personal fines or jail for willful violation of the regulations, in the author's view the behavior would be better.

c) Cap ratings for new products without credit history

The ratings have performed reasonably well in most sectors. The spectacular and massive failure occurred in structured finance. These products did not have a long history. The new and untested subprime mortgages, and the RMBS and CDOs that they backed, never went through a really stressful economic environment. One proposal, discussed by Professor Hunt, is that the insurance regulators only accept ratings on new products after a "seasoning" period. This seems like a good idea. A variation on this would be to cap the

ratings. So, for example, a new type of security cannot be rated above single A. Of course, a problem would be, how to define what is an appropriate seasoning time period, and at what rating should the security be capped at. But, still this would warn investors of the extra risk of such securities.

d) Government review of credit rating criteria

Although many have argued against this, maybe there should be some independent agency or government agency which examines CRA criteria. This does impinge on CRA analytic independence, but, the benefits could outweigh the negatives. This solution has some of the benefits of creating a government operated CRA, but without all the costs. It would require a team of specialized analysts outside the CRAs to measure and test the validity of the CRA models and assumptions. Of course, as with a government operated CRA, this would shift the burden and potential liability to the government.

e) Investor choose/Issuer pay

An interesting idea, that was suggested to the author, by David Jacob, is to replace the current business model with a model in which the investors get to choose which CRA is used to rate the bonds, but the issuer should still pay for the credit ratings. Under this approach, rating shopping would be eliminated. Since the investors have a real interest in getting high quality ratings. Also, this would eliminate or at least reduce the CRA legal argument that they have no relationship with investors. Investors would have a better chance of winning a lawsuit against the CRAs for sloppy work.

f) Use CRA ratings & Internal Models

In the author's view, the over-reliance on credit ratings was a central part of the financial crisis. Both regulators and financial institution risk managers out-sourced their responsibilities. Instead, the author believes that the regulation should require the use of internal risk models and measures to supplement the credit ratings provided by the CRAs.

g) Prohibit certain types of loans and behavior

The Dodd-Frank Act was not just directed at the rating agencies. It was comprehensive financial market reform. The focus of this thesis has been on the rating agencies, but some of the rules (like those which affect things like mortgage standards), will help the market avoid the same problems, by prohibiting some of the products that lend to the collapse (Christie 2013).

With these new rules, there will not be anymore "liar loans" or loans with low initial "teaser" interest rates, or negative amortization. While this is not a satisfying solution for the problems of the rating agencies, at least, the government has stopped this problem at the source. The CRAs won't even have the opportunity to mis-rate them.

Another rule that might help, would be to make it illegal for issuers to try to get CRAs to lower their standards. It is actually incredible that "rating shopping" by issuers is legal. But at a minimum, in the author's view, it should be illegal for issuers to pressure CRAs.

SUMMARY

This thesis presents an analysis of the effectiveness of the guidelines and regulations that have been adopted over the last 10 years to control the Credit Rating Agencies. Despite repeated failures and some spectacular errors committed by the Credit Rating Agencies, the CRAs remain an important part of the fixed-income capital markets. It is impossible for an issuer to sell large amounts of debt to investors without first getting a credit rating. Investors and regulators continue to use credit ratings as investment benchmarks, and measures of risk. Whether the errors were due to lack of proper analysis, or due to CRAs trying to please their clients, inflated credit ratings create huge risk for the capital markets. Indeed, many view the CRAs as major contributors to the recent financial crisis.

The current framework for CRAs is fraught with conflicts of interest. For an issuer, getting a higher credit rating, means getting cheaper capital. This creates a major incentive for an issuer to pressure a CRA to give high ratings to the issuer's debt. CRAs are private companies with a goal of long-term profit maximization for their shareholders. They operate in an oligopolistic market dominated by three firms. CRAs are hired and paid by the issuers of debt to assign credit ratings. CRAs compete with one another to be hired by issuers to rate the debt. As a result, CRAs have an incentive to make their clients happy by assigning high ratings to their debt. Since credit ratings are based on analytics and models created by the CRA, the CRAs can weaken their standards in order to be able to assign inflated credit ratings.

Regulators of financial institutions around the world, by using credit ratings as risk measures, have outsourced their risk oversight role to the CRAs, thus giving the CRAs enormous power and importance. In fact, until some recent changes, credit ratings have been embedded in many government regulations related to capital adequacy for banks and

insurance companies. Since banks and insurance companies are among the largest purchasers of debt, the systemic risk to a country and its financial institutions from inflated credit ratings is very dangerous to the financial health of a country.

Credit ratings also can influence a country's cost of debt. Many believe that CRAs contribute to the weakness of governments when they lower a country's credit rating. This problem of the pro-cyclicality of credit ratings remains one of the most difficult challenges for the marketplace, and is likely an area of future research.

Whereas in the past, governments simply left CRAs alone to essentially self-regulate under the theory that they would strive to maintain their reputations, the recent failures by the CRAs have led governments around the world to re-visit the idea of regulating the CRAs. The CRA problem is a global financial market problem, not only because the CRAs rate debt in many countries, but also because bonds issued in one country are purchased by investors in other countries. In fact, in the recent financial crisis, many European and Asian institutions, collectively purchased billions of dollars of AAA rated debt that was issued in the USA, most of which was quickly downgraded, and much of it defaulted.

Beginning in 2004, with adoption of IOSCO's Code of Conduct for CRAs, followed by the Credit Rating Agency Reform Act of 2006, and regulations by ESMA in Europe, and the Dodd-Frank regulations of 2010, the CRAs have been subjected to increasing government oversight and regulation.

While acknowledging errors due to poor analysis that led to faulty ratings such as in the case of the Enron corporation, the main thrusts of the regulations have been aimed at addressing the conflicts of interest, which have led to CRAs competing with each other for business by lowering their credit standards and misleading investors. The IOSCO guidelines specify that a CRA should set criteria independently of business considerations. The regulations have required CRAs to document and publish their criteria. Ratings have to be assigned based on the criteria.

The CRA Reform Act of 2006, set some standards for becoming a nationally recognized CRA, and gave the SEC power to penalize CRAs. Rule 17g-5 adopted by the SEC specifically addressed CRA conflicts of interest. The rule tried to encourage unsolicited ratings to curb rating shopping. The government also tried to encourage the creation of more CRAs in order to reduce the power of the three dominant CRAs.

The most important aspect of the Dodd-Frank legislation regarding CRAs, was the requirement that Federal regulations could no longer use credit ratings. The idea was again to reduce the power of the CRAs, by eliminating the requirements that their ratings be used. The regulations also attempted to increase CRA accountability and liability. Significantly, the regulations in the USA, have not included requirements about the validity or quality of the models or analysis.

The academic community only began to focus on the CRA industry and its problems within the last 10-15 years. The focus of most of the research is on the conflicts of interest posed by the issue-pay business model, and the “regulatory license” that has been granted to the CRAs by the government. In some respects the CRA industry fits into the principal-agent problem. But, there are significant complications in the CRA industry, because there are several principals involved with conflicting objectives. The main principals in the CRA market are the issuers, the investors and the regulators. As a result it is more difficult to get the CRAs to properly perform for all three principals. Some of the ideas proposed by the academic community have been adopted by the regulators in some form, such as increasing the liability of CRAs, reducing their role in regulation, and requiring greater reporting and documentation.

The main proposition of this master’s thesis is that the guidelines and regulations that have been adopted to date are insufficient to alter the bad behavior of the CRAs that led to the erroneous ratings, which in turn greatly damaged financial institutions, investors and economies all over the world. The main contribution of this thesis is to demonstrate through evidence from legal cases and ongoing CRA behavior that even well into 2013, the regulations are not working.

This thesis attempts to prove this proposition with several sets of evidence. First, neither the IOSCO guidelines, nor the CRA Reform Act of 2006, were able to prevent the financial crises that occurred in 2007. Second, the CRAs have escaped liability in most of the cases that have been brought against them. Third, the CRAs have returned to their bad behavior of changing criteria to gain market share. Fourth, one of the CRAs terminated all the senior management that it had hired to change the behavior at the CRA. And, finally, in 2013, the USA department of Justice along with the 16 states brought major lawsuits against Standard & Poor's. But, the important point is that they did not use any of the new regulations as the basis for their lawsuit. Instead they used an obscure regulation from 1989, which deals with banks, and those that provide information to the banks. And the States' lawsuits are based on consumer fraud regulations. The lawsuits accuse S&P of misleading the banks and investors, by saying that they do not take business considerations into account when creating ratings criteria. This demonstrates unequivocally the impotence of the new regulations! This is the clearest proof that the regulations that were specifically adopted to control the CRAs have failed.

In fact, as reported in the Wall Street Journal, in their stunning response to the government's lawsuit (on April 21, 2013), S&P admitted that their "representations about the independence of their criteria was "puffery" (for advertising purposes), and were never meant to be taken at face value by investors". Thus, S&P essentially has now said that they are not really following the IOSCO guidelines. And, so, it is clear that even with the most recent legislation the CRAs continue to let business considerations influence their choice of analytic criteria for their credit ratings.

In the final section of this thesis, the author presents an analysis and discussion of potential solutions and presents a multi-point plan to improve the current framework. An innovative idea by the author is proposed to combat rating shopping. The proposal suggests that the government randomly choose deals for which an issuer declined to use a particular CRA, and then require that CRA to rate the deal. In this way, the public would benefit from this information, the issuer would not be able to fool investors by using a CRA with low

standards, and the CRA would not be able to avoid rating the deal for fear of offending a potential issuer client.

The author also suggests that penalties and liability for violations be increased and directed not just at the CRA institutions, but at the individuals on the senior management team. It is likely that the fear of personal liability would do a better job at encouraging good behavior and compliance with the law.

Author's suggested plan to improve CRA oversight & performance:

- a. Keep main elements of current framework
 - i. Private CRAs
 - ii. Issuer-pay, but modified by having investors choosing the CRA
 - iii. Government regulated
- b. Government should review, test, & approve credit rating criteria
- c. Government should create standards for each rating category
- d. Government should abandon goal of creating more NRSROs
- e. Government should randomly mandate ratings of some deals by non-hired NRSROs
- f. Increase penalties for violations, and direct penalties at individuals in management
- g. Reduce over-reliance on CRA risk measures, by requiring financial institutions to supplement with their own analytics and risk measures
- h. Make it illegal for issuers to pressure CRAs

It is clear that more work must be done to understand why the regulations continue to fail, and to understand the dynamics of investors and issuers as they use credit ratings. It still remains open to discussion as to whether or not the conflicts of interest inherent in an issuer-pay model can be managed. We won't know for sure until the next crisis, if the CRA problem has been solved by the regulations imposed today.

To sum up, the CRAs, by assigning AAA, AA, and A ratings to trillions of dollars of securities, which very quickly performed very poorly, were a major facilitator of the 2007 financial crisis. Without them this crisis could not have occurred. The regulators gave them

the power, and the public paid the price. Without admitting its own guilt, the government has decided to try to reign in the power of the CRAs that they regulate. The initial efforts of self-regulation have failed, as have the regulations created under the Credit Rating Agency Reform Act of 2006. Some of the ideas expressed in CRA 2006, and the IOSCO Code of Conduct, were good ones, but not good enough to prevent the rating agencies from contributing to the largest financial crisis since the Great Depression. Moreover, following the crisis, the CRAs managed to escape accountability and liability.

The more recent Dodd-Frank Act has added to the regulation, but it appears, at least thus, far, the new regulations may still fall short, as they do not address the core conflicts of interest. While calling for the removal of rating, the rules do not provide the framework for a viable alternative. Moreover, as cited in the recent State of California lawsuit, the government maintains that the bad behavior of misrepresenting credit ratings, and rating shopping continues.

The new regulations have largely focused on processes and procedures for becoming an NRSRO, documenting analysis, increasing liability and so on, but they have not addressed the core issue of the quality of the analysis. Nor have they made rating shopping/catering illegal. Thus, many of the problems and exposures remain.

Ratings can serve an important function. They continue to be used, even as Dodd-Frank has taken them out of regulation. So, there is no alternative, but to improve regulation and compliance. Creating new rating agencies, does not appear to be the solution. The incentive to chase market share, by lowering standards must be minimized. Regulation must demand clear and comparable ratings. Strong penalties for lack of compliance must be implemented. While it would be good if CRAs voluntarily competed on the basis of quality, regulation and the ability to hold CRAs accountable is necessary. The current framework is still not sufficient.

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APPENDIXES

Appendix 1. February 4, 2103, US Department of Justice files \$5 billion lawsuit against Standard & Poor's

Addendum

A Major Blow to the Credit Rating Agencies-- based on a new legal approach

On February 4, 2103, the US Department of Justice filed a \$5 billion lawsuit against Standard & Poor's. This was followed by a related suit filed on February 5, filed by the State of California. Other States have followed with their own lawsuits. The state lawsuits seek court orders to stop S&P from making misrepresentations to the public; changes in the way the company does business; civil penalties and disgorgement of ill-gotten profits, which may total hundreds of millions of dollars. Also filing lawsuits are, Arizona, Arkansas, Colorado, Delaware, the District of Columbia, Idaho, Iowa, North Carolina, Maine, Missouri, Pennsylvania, Tennessee, and Washington. The market immediately recognized that these lawsuits are different from the ones brought that have been brought in the past. The stock price has plunged from \$68 to around \$44 per share. Both Moody's and Fitch have downgraded McGraw Hill's (owner of S&P) bonds.

In a scathing legal document, the Justice department accused Standard & Poor's of knowingly defrauding by claiming that their criteria and analysis that results in their credit ratings are independent of business considerations. But, showing extensive evidence, which demonstrated that market share was an important factor in the decisions of how criteria were determined. This legal approach is different, because the claim by the government is not simply that criteria were influenced by commercial considerations, but that S&P defrauded the public by claiming that the analysis that determined ratings were independent of profit. Thus, it was a fraudulent representation of their product. The government claims

that the banks, which are regulated by the government and bought bonds rated by S&P, relied on S&P's ratings and their representations about their ratings. In the documents the government shows numerous emails and memos, which show how management and analysts gave considerable consideration to market share, as they discussed potential criteria and model changes.

What is most remarkable about this legal approach, is that it has nothing to do with rating agency regulation. It is all based on an old 1989 regulation known as FIRREA, which is about doing business with banks (<http://www.economist.com/news/finance-and-economics/21571448-america-justice-department-charges-standard-poors-fraud-victim-support>). This is further proof that the new regulations have not yet proven effective to control the rating agencies or hold them accountable. What this means is that neither CRA 2006, nor Dodd-Frank are being used in this litigation. Interestingly, the IOSCO code of conduct, which is not regulation, is cited. It is used to demonstrate how S&P advertised its code of conduct, but didn't follow it.

"The complaints allege that investors and other market participants, such as state regulators, relied on S&P's promises of independence and objectivity. Instead, S&P acted to benefit its own financial interests by adjusting its analytical models for rating residential mortgage-backed securities and collateral debt obligations to ensure it assigned as many AAA ratings as possible. Assessing actual credit risk was of secondary importance to revenue goals and winning new business, the complaints allege.

Further, the complaints allege that S&P's profit motive affected its monitoring, or surveillance, on previously rated RMBS and CDOs. In order to continue earning lucrative fees, the complaints allege, S&P delayed taking rating actions on impaired RMBS and continued rating new CDOs even after it determined that the security's underlying collateral was impaired" (<http://www.ct.gov/ag/cwp/view.asp?Q=518298&A=2341>). The State of California's lawsuit goes further and accuses S&P continuing to behave the same up until today (http://oag.ca.gov/system/files/attachments/press_releases/S%26P%20complaint.pdf, page

10, and pages 59-62). While S&P denies the allegations, it has been noted in the press that they offered the US government \$100 million to settle the case. The government turned this down. They want a much larger amount, and an admission of guilt.

*Source:

http://oag.ca.gov/system/files/attachments/press_releases/S%26P%20complaint.pdf

Appendix 2. Interview with former Executive Managing Director of S&P

Dear Mr. Jacob,

04/12/2012

I am currently working on my master's thesis on the credit rating agencies. Given your vast experience in fixed income at the major investment banks and your recent role as Executive Managing Director at Standard & Poor's, I am writing to you for your help in answering some questions I have on the securitization market and the CRAs. I have read a lot about the financial crisis and the role of the CRAs. It appears to me, however, that the regulations are still failing, since they only address the process, not the core problems of the market structure of CRAs. I hope that you don't mind my seeking your knowledge in this matter.

Sincerely,

Merit Leib

Dear Merit,

December 10, 2012

I would be happy to answer your questions. For your information. I continue to consult with government regulatory agencies on the matter of the CRAs. So, in some areas this remains confidential, and may not be able to answer specific queries. Your thesis topic is very timely and very important. The CRAs despite their failures, remain an important part of the fixed income markets. While I do not believe that they are indispensable, they continue to be used by issuer, investors and regulators. In general, I agree with the main point of your thesis—namely that the regulations are simply not sufficient to fix the problems of the CRA structure, and thus, the problems that led to the financial crisis, could recur.

By the way, I would be happy to read through your paper (obviously in English), and provide comments. The CRAs are a very important topic, and very much in the mind of the regulators. For your reference, I have attached my CV.

Sincerely,

Mr. Jacob

Dear Mr. Jacob,

December 12, 2012

Thank you so much for agreeing to help me with some background information for my thesis. Please find attached questions. Please feel free to expand on your answers, as I am sure all the information you provide will be helpful. I hope you don't mind if I quote you. I look forward to your prompt reply.

Thank you,

Merit

Question 1

It appears that securitization and Asset-backed securities (ABS) were at the center of the financial crisis, and that their ratings were flawed from the beginning. Could you describe securitization and why ABS are different from other bonds?

I have been involved in securitization since the early beginnings of this market in the 1980s. Securitization has many benefits, but also can be misused. The basic ideas and principles behind securitization are simple, however, over time, the structures became increasingly complex. The origin of securitization was in the US residential mortgage market as early as 1970, but has since been applied to many assets, including commercial mortgages, bank business loans, credit card debt, auto loans , intellectual property, and many more esoteric assets. The bonds created through the process of securitization are known as asset-backed securities, or ABS. The largest sector, by far, was the US residential mortgage market and the securities that were created are known as RMBS-residential mortgage-backed securities. The original transactions were sponsored by US Government Agencies. You can go look at their websites for information. For those

transactions there was no credit risk. The motivation for securitization was to take illiquid mortgage loans and create liquid securities with bond-like, cash flows.

The term, “securitization” is a very general term and is not always used the same way by different people. Moreover securitization can accomplish several different objectives. Today, the most common notion is that by assembling a group or pool of generally lower quality, illiquid loans or bonds, one can, via financial engineering and structuring techniques, create more highly rated bonds.

In order to get these higher ratings, some form of credit enhancement is needed. The most common form of credit enhancement is the senior-subordinated structure. Unfortunately, the amount of credit enhancement was insufficient, and so the securities turned out not to perform like AAAs.

The idea behind the senior-sub structure, is that several layers of bonds are created, each higher level, is senior to the lower level bonds when it comes to the allocation of losses resulting from defaults on loans in the underlying pool. So, for example, suppose the pool consisted of 10,000 loans, each being \$100 in size. So the total size of the securitization will be \$1,000,000. Suppose there are three tranches or levels of bonds created. Suppose the top layer is \$700,000 in size, the middle layer is \$200,000, and the bottom layer (known as the first loss piece), is \$100,000. Suppose, in some bad economic environment 50% of the loans default, and the loss on the loans averages 40%. This would mean that the loss to the whole pool was 20%, or \$200,000. The loss be first allocated to the bottom bond class. Since its principal balance was \$100,000, it would be wiped out completely. There remains \$100,000 loss to be allocated. This loss gets allocated to the middle bond, whose original principal balance was \$200,000. So these bond holders suffer a 50% loss on their initial investment. The top bond holders are completely protected from the losses on the pool, even in this severe scenario. If this severe scenario was what the CRA felt was AAA stress then it would have rated the senior class AAA. The middle class would only be able to withstand a less stressful scenario, so, it would have to be rated something less than AAA,

maybe BBB. And the bottom class, the first loss piece, would likely be unrated, and sold to investors at a high yield who want to take this risk.

So, you see, it is not so complicated. There are legal structures which protect the loans from claims from others in the event of bankruptcy of the originating banks. This is known as the bankruptcy remote characteristic of the special purpose vehicle (SPV), that is created to hold the loans that backing the bonds which are sold to investors.

The CRA gets to decide how much AAA, AA, A, BBB etc. can be created based on the credit characteristics of the loans. From the issuer perspective, the more AAA that can be created, the more profit they can make. So they have a tremendous incentive to pressure the CRA to have lower standards, in order to get more AAA. But the standard can't be so low, that investors won't believe them. This is how rating shopping and rating catering enters into the ratings, particularly with securitizations. The CRAs competed for business by relaxing their assumptions.

With CDOs the CRA analysis and models, depend heavily on assumptions about the default correlations between assets in the pool. The estimates for these have varied widely, and had little basis in empirical analysis. Small changes in these assumptions, lead to substantial differences in required credit enhancement. Thus, giving the CRAs a lot of leeway to give away the AAA.

New regulations require the publication of all assumptions, and if a CRA wants to deviate from model results, they must make this known as well

Question 2

How did the role of the CRAs in rating ABS, enable their growth and ultimately their failure?

ABS, as I described in response to your first question, were complicated. Many investors needed a third-party to help them evaluate the risk of these securities. Also, there was an imbalance in demand and supply for AAA-rated securities. There are very few AAA-rated

corporate bonds. Also, unlike corporate bonds, where there are also, equity analysts who look at the companies, and stocks that trade, ABS securities have no prior historical information available, no real financial statements (just characteristic description of the underlying loans), a very short selling period. So, investors who want to buy these assets need tremendous resources to analyze them, or rely on a third party like the CRAs. The size of the USA residential mortgage market was huge. So this really helped the CRAs grow. They were in the perfect spot to evaluate them, especially because the regulators gave favorable capital treatment to securities rated AAA by an NRSRO. Moreover, with the advent of credit default swaps synthetic securitizations were created, which, in effect created an infinite supply of loans to be securitized.

The market also grew dramatically in terms of diversity. Not only were RMBS created, but also, Structured finance was applied to other areas as well, Commercial-mortgage-backed securities (CMBS), Collateralized Debt Obligations (CDOs), Collateralized Loan Obligations (CLOs) , etc.

The securities became more complex and the volume of issuance was gigantic. The fees they were paid for the ratings were very large. Whereas the fee schedules for rating corporate bonds are made public, the actual fees charged can be negotiated based on size and frequency of issuance. On the other hand, fees for structured finance transactions are not published at all. These fees are more heavily negotiated. The fees for SF ratings can range from \$500,000 to over \$1,000,000. (because of the potential for conflicts of interest, all fee discussions today are kept away from the analysts and done by a separate group at the rating agency)

The CRAs became very greedy, and wanted to rate every deal. So they began lowering their standards to keep their market share. They ignore the increasing risk. Of course this led to the financial crisis.

Question 3

In your view, do investors actually rely on the credit ratings? How do they use credit ratings in their investment process?

I guess the answer to your question is yes and no. last year I did an interview on Bloomberg news on this topic. In the past many more investors relied on the credit ratings. There were 2 reasons to use the ratings. First, to save the investor the time and work necessary to evaluate the credit risk of the securities they were considering buying or selling. While the large investors such as Blackrock, PIMCO, WAMCO, Prudential, etc, had their own large staffs to do this, smaller investors did not. And they relied heavily on the ratings. Investors in Europe and Asia also relied heavily on the ratings. The second reason was because the ratings may have satisfied a regulatory requirement. As the CRAs have had more problems and have angered investors with the big failures, particularly in structured finance, investors are far more skeptical of the analytic and predictive value of credit ratings. But they still use them for reporting risk. Even with dodd-frank where the requirement is to take the reference to credit ratings out of the regulations many institutions such as insurance companies, pension funds, and even central banks continue to use them.

To answer your second question , the way credit ratings should be used in the investment process is to enable investors to assess the credit risk of securities. With this, and all the other risks, the investor will compare the relative value of different securities with comparable risk, and try to buy the highest yielding securities in each risk category. So for example, if 2 equal maturity securities were rated AA, the investor likely want to purchase the security with the higher yield (highest interest rate).

It is important to realize that credit risk is not the only risk of bonds. The concept of credit risk is elusive. Bonds have many risks, including interest rate risk, liquidity risk, and credit risk. Speaking mathematically, risk is a measure of uncertainty that is expressed by some statistical measure of deviation from an expected (mean) outcome, such as standard deviation . A bond investor is promised interest payments and principal repayment and fixed points of time in the future. The extent to which this does not happen, represents risk

to the investor. Credit risk, is the risk that the promised payments do not occur, due to the borrower's inability or unwillingness to pay. There could be other reasons why the actual payment stream varies from the expected payment stream. For example, a bond could be callable or subject to other contractual provisions.

When bonds have different maturities or durations their risk is different. The longer the maturity the greater the interest rate risk. That is for a given change in interest rates, a bond with a longer maturity or duration will have a greater price change.

Liquidity risk refers is measured by the gap between the bid price (price buyer willing to pay) versus the offer price (the price the seller wants). When a security trades infrequently or is small, the bid-offer spread is large. Also when markets are disrupted, the bid-offer spread can get very large.

Question 4

According to your CV, earlier in your career (in the early 1990s) you worked on structuring CMBS deals for Nomura Securities; how would you compare the CRAs back then, versus the later years right before the crisis ?

The credit enhancement required to achieve AAA dropped dramatically. For example, in CMBS, in the early 1990s, the typical credit enhancement for AAA bonds was 30% subordination. By the 2006-2007, there were junior AAA classes with only 11% subordination.

The loans themselves were more risky with higher leverage. New products were being rated with no prior performance experience, particularly in sub-prime RMBS.

Question 5

What is your view of the regulations aimed at the CRAs ?

I think some of the regulations are positive, but I agree with you that they are insufficient. I think big loopholes remain. I think that the requirement by Dodd-Frank to remove references to credit ratings is good, but I still don't think investors have the ability or information to evaluate the risks themselves. Reg AB II, needs to be implemented as quickly as possible.

I think it is good that requirements for publishing ratings performance were adopted, and it was recommended that all CRAs use a standard approach to facilitate comparative performance across rating agencies.

A good example of where there was a good intent with a rule, but where it failed to have the desired result was rule 17g-5. This rule had several provisions, but one was meant to encourage unsolicited ratings, which would reduce the incentive of an issuer to go rating shopping.

Under rule 17g-5, all the information that was supplied to the hired NRSRO was made available via a website to all other NRSROs. So, in theory, with this information, any non-hired NRSRO could issue an unsolicited rating. Unfortunately, the issuers did not give permission to the non-hired NRSROs to publish any of the information that they obtained from the website. This would mean that the non-hired NRSRO could publish a rating, but the rationale for the rating. This would be against the IOSCO code of conduct, because a rating needs an explanation.

While at S&P, I tried to issue unsolicited ratings, but my legal department expressed concerns about the breach of unconfidentiality. So instead, I came up with the idea of an unsolicited "commentary", where my analysts would give their view of the transaction without issuing a rating. This innovation was well received by the market, but it had severe drawbacks. First, the information available on the 17g-5 websites, by law, couldn't be used for this. So all information had to be from publicly available sources. The public sources were incomplete and often not available in a timely manner. So the commentaries sometime came out after investors had already purchased bonds based on the credit ratings of the engaged CRA.

I think an important area of regulation was to address the potential of a CRA trying to force the use of its ratings. Credit rating agencies were prohibited from using coercive tactics to get issuers to use their ratings, or "to modify a credit rating or otherwise depart from its adopted systematic procedures and methodologies in determining credit ratings, based on whether the obligor purchases... the credit rating". The rules also prohibited a policy which became known as "notching", where a rating agency would refuse (or automatically use a lower rating- notch down), to rate a pool of assets in a securitization, if the underlying assets in the securitization only use the rating of another agency.

In my view, another big loophole remains because the law does not permit the regulators to impinge or do much about the analytic content of the ratings criteria. All the regulation does is require the CRA to follow its published criteria. I have noticed a trend lately, where new criteria are vague and qualitative. This would make it difficult for a regulator to prove that the CRA did not follow its criteria.

To sum up, I don't think the USA regulations will be effective, neither CRA 2006 nor Dodd-Frank. Aside from the new specifications to be an NRSRO, and some disclosure and reporting requirements, and the ability to penalize a rating agency, there really were not many specifics that addressed the core conflicts. The regulation focused on process and ideas. While stating that competition was to be encouraged, no mechanism was set up for this. Moreover, some of the provisions, especially regarding notching, seemed to re-inforce the idea that unsolicited ratings might be viewed as anti-competitive and coercive!

Question 6

Do you think that the conflicts caused by the issuer-pay model are the main problem?

It can be a problem, but I still think it can be managed. I think the separation between analysts and the fee negotiation group is helpful. But, I think it is silly, and unrealistic for a CRA to say that its selection of criteria are independent of business considerations. Obviously, if the entire marketplace thought that the criteria of a CRA are useless, either too strict or too lax, the CRA would not stay in business for very long. CRAs are for profit

companies. So, unless a non-profit CRA is created, the presumption of complete independence from business considerations is ridiculous. CRAs should not say that this is what they do.

Question 7

What risks do credit ratings measure ? and, do you think they adequately measure these risks?

As I already mentioned, credit ratings only address credit risk. It is interesting that even with this, there is a non-uniformity as to what constitutes credit risk. And, differences about whether they should be absolute measures of credit worthiness or relative measures.

BTW ratings do not take into account the risk of fraud. The CRAs have relied on the information they are given. The Code now requires that a CRA indicate the limits to which "it verifies information provided to it by the issuer or originator of a rated security". This is important because many investors and other market participants believed that the CRAs verify the data. But, the CRAs have said they do not rate for fraud. Although the recent trend in regulation is to require them to attempt to verify.

There are also debates within CRAs as to how ratings should be adjusted if the quality of information is poor.

My view is that credit ratings are a very simple measure. So that on the one hand it is a very handy and quick way to communicate relative credit risk, on the other hand, because it is such a crude measure, it doesn't adequately measure credit risk.

Question 8

While you were at Nomura and JP Morgan, you hired CRAs to rate transactions that you created, could you describe the inter-action with the CRAs and the process of obtaining a rating?

they do. I think like most investment banks, we just viewed CRAs as one of the things we had to deal with. We felt we were much smarter, and really the goal was to present the deal in the best possible light. In many situations we had to teach the CRAs how the deals worked and how to analyze them. And, yes, all investment banks engaged in rating shopping

Question 9

Do you think having more CRAs would help solve the “rating shopping” problem ?

Absolutely not!!! It makes the problem worse! Unlike competition in most areas of business, which leads to higher quality at lower cost, in the rating agency business, cost of ratings is not the issue nor is the quality. New entrants get business by having weaker criteria.

Question 10

Are credit ratings comparable across different securities?

This was a goal at my company, but I did not believe it was completely achievable. Let me give you an example. I live the village of Kings Point, in Long Island, NY. It is a relatively affluent community of about 4,000 people. Our bonds are rated AAA. It is hard for me to believe that my village has a higher credit rating than that of the government of the USA.

Question 11

In your view, what were the bad practices of the CRAs?

Well, of course, the worst is competing for business by weakening rating criteria. This was a corrosive behavior, which over time led to very inflated ratings and ultimately the financial crisis.

I think not focusing enough resources on the surveillance function (because the CRAs don't make much money from this), led to many problems.

I think complete lack of order and clarity of the criteria, made it difficult for outsiders to understand the ratings

Another accusation made against the rating agencies, is that they actually helped the issuers to structure the transactions, that, they went ahead and rated. That's like a student creating his own exam, and then grading it! The idea is that the issuer would show the rating agency a transaction that it was considering, and propose a structure and credit enhancement. Then rating agency would discuss, maybe negotiate, with the issuer, how to get most AAA bonds. This has not been proven one way or another. But, the government was so unhappy about this possibility that they passed a rule prohibiting this behavior

Question 12

In your view, do you think the CRAs violated the regulations ?

This is a difficult question to answer. Of course, which regulations?? As you know, prior to 2006, in the USA, there were no real regs. I think did they violate the spirit if not the letter of the IOSCO code. I think there are instances of violations since 2006, and some of these have been written up in the SEC annual reports. But the CRAs have gotten nothing but a slap on the wrist so far.

Question 13

Why have the CRAs escaped all liability?

Great question!! That's what everyone is trying to figure out and fix. I think they have been very clever, they great lawyers, they have effectively protected themselves through the First Amendment. The courts have been reluctant to impinge on the freedom of speech, and the regulators, similarly place an emphasis on analytic independence. While these are all commendable goals, they came at the price of the CRAs, not being accountable.

Question 14

How would you compare US regulation to European regulation of CRAs?

See my answer below. (question 19) In general, I think the European regulations will be more effective. And, I think they were more realistic about going slowly in removing the use of credit ratings. I think the effort to create a European CRA was silly. I think there is a bit too much public hysteria in Europe, probably due the sovereign crisis in southern Europe.

Question 15

Do you think the CRAs did an adequate job in other asset classes besides ABS?

Yes. Look everyone can make some mistakes. Enron, or Worldcom or National Century were certainly examples of major CRA failures, but they really were exceptional. By and large the ratings have performed well for corporate bonds (maybe except for banks), municipal bonds, and even sovereign bonds. The problems, of course, cited by many about the pro-cyclicality effect remains, but I don't see a good solution for this

Question 16

Without divulging confidential information, can you give me an idea of of how many \$ of ABS were rated by S&P?

Between September 2004 and October 2007, S&P rated approximately \$2.8 trillion of RMBS \$1.2 trillion of CDOs. I don't have the S&P figures for the other ABS classes readily available, but this should give you an idea of how large this market is. You can get more information about issuance from the ASF websites and trade magazines such as Asset-backed alert. In structured finance very little could be issued without the rating agencies. I cannot think of any deal that was not rated. This was similar for corporate bonds. So, in every sense, the rating agencies became the gate keepers for credit evaluation.

Question 17

Why was the rating performance so much worse for ABS ?

The analysis in the US RMBS sector was based on a flawed assumption of future increases in home values. This one assumption permeated the ratings of \$trillion of RMBS. Similarly for CDOs backed by tranches of RMBS deals the assumption that diversity of the underlying bonds implied a lower correlation, led to an underestimate of the risk. This is so different from corporate bonds or sovereign bonds, where the risks of each company or country are distinct. Also, ABS were usually structured with the minimum credit enhancement needed to achieve a particular credit rating, so if there was some slippage in performance, the rating had to be lowered. Also CRAs competed with each other by lowering their standards to gain or maintain market share. This practice was mostly limited to ABS.

Question 18

In your view, is the US government and its agencies pursuing S&P because S&P downgraded the USA credit rating?

Absolutely not. This is a silly theory, which I can tell you from personal knowledge is just wrong, and makes no sense. I have no reason to support S&P on this, as this was not my area of operation. I am guessing that Europeans like to speculate about such government retaliation actions, but really, this is just not the case. What would this accomplish? S&P does not get paid for rating US government debt or the debt of most of the large countries. And, in the case of the USA, interest rates dropped following the downgrade. The Chinese rating agency rates the USA as a single A, and I believe Egan-Jones downgraded the USA before S&P. I personally don't think most investors care at all what the CRAs rate the USA.

Question 19

Can you succinctly describe the regulatory efforts in Europe and contrast with the those in the USA?

Although the financial crisis and the rating agencies' role was centered in the USA, its effects were felt globally. Many banks bought securities that were based on US RMBS. And regulators in Europe gave special regulatory capital relief to securities with high credit ratings. Moreover, European governments are very sensitive to the power of the rating agencies as they can, through a rating downgrade, cause a country's cost of borrowing to rise, sometimes significantly. In recognition of this power and role, European regulators through ESMA has been studying regulation of CRAs, making suggestions, and implementing some changes. It is interesting that sometimes regulations adopted in other jurisdictions can impact rating agency behavior on a global basis. For example, the European regulators decided to require a special symbol for ratings for SF products. Because, securities are sold all over the world, the rating agencies decided to use it in all jurisdictions.

I am not sure how to quickly summarize the European approach for you. In my view it is better, because they get closer to the core problem of the analytics,, and they have some severe penalties. And, I think they are very serious.

Let me try my best to summarize.

In September 2009 the EU adopted its first law on CRAs, called “Regulation (EC) No 1060/2009 of the European parliament”. That law included extensive treatment of conflicts of interest. The basic requirement was that a CRA should organize itself to ensure that business interest does not impair the independence of its credit rating activity.

In addition the regulation specifically included a substantive provision about criteria for making ratings. Article 8(3) states that “ A CRA shall use rating methodologies that are rigorous, systematic, continuous and subject to validation based on historical experience,

including back testing” the language is similar to the IOSCO code. US regulation is far less specific. In my view, this regulation could have helped prevent the financial crisis, because, clearly there was not sufficient information on sub-prime mortgages would perform.

In September 2010, CESR (committee of European securities regulators) published guidance on the meaning of Article 8(3). In late 2010 the EU created ESMA (the European Securities Markets Authority), to supervise the CRAs like the SEC in the USA.

In March 2012 the EU finalized and adopted ESMA’s 2011 proposals with some really important details. In order to meet the requirement of rigorousness, the CRA is required to provide a detailed explanation of each qualitative and quantitative factor affecting the credit rating, and statement of the importance of each factor, an assessment of the relationship between key assumptions, and the potential volatility of the credit rating.

In addition the EU specifies fines for violations in the range of 500,000-750,000 Euros.

Appendix 3. History of growth of CRA industry

Pre- CRA				
	1832	1849	1841	1849
The American Railroad Journal	Poor's Manual of the Railroads of the United States	The first mercantile credit agency (acquired by Robert Dun in 1859)	John Bradstreet agency	
CRA				
Phase 1 (1909- 1943): Establishment of the CRA industry				
	1909	1916	1930	1933
John Moody's agency	Entry of the Poor company into the rating business. John Knowles Fitch founds Fitch Ratings	First regulatory uses of credit ratings	Consolidation of Dun & Bradstreet (D&B)	Merger of the Poor company with Standard Statistics
Phase 2 (1944-1969): Period of economic stability and low demand for ratings				
	1962			
D&B acquires Moody's Investor Services				
Phase 3 (1970-2001): Period of major economic shocks; development of demand for CRA services				
	1970	1975	1995	2000
Penn Central defaults on its commercial paper. Issuer-pays model is introduced as a result.	SEC established the list of nationally recognized statistical rating organizations (NRSRO)	Fitch Ratings becomes part of Fitch IAC SA.	Fitch Ratings acquires Duff & Phelps Credit Rating Co.	
Phase 4 (2002- present): Rapid development of financial innovations. Expansion of CRAs outside the US.				

* Source: "The rating agencies and their credit ratings" Langohr, H., Langohr, P., 2008, page 376

Appendix 4. Analyst e-mails

Below is a sampling of the emails between analysts:

- "... improving (the accuracy of) the model would not add to S&P's revenues." Email, 3/23/2005.
- "Let's hope we are all wealthy and retired by the time this house of cards falters." Email, 12/15/2006.

- “We found from the arranger that our support level was 10% higher than Moody’s .. the only way to compete is to have a paradigm shift in thinking..” Email, 5/24/2004.
- “I would recommend we do something [u]nless we have too many deals in the US where this could hurt...” Email, 5/24/2007.
- “Lord help our fucking scam ... this has to be the stupidest place I have worked at.” Email, date unknown.
- “I am extremely afraid of the seeds of destruction the financial markets have planted... I have been a mortgage broker for the past 13 years and I have never seen such a lack of attention to loan risk. I am confident our present housing bubble is not from supply and demand of housing, but from money supply...” 6/27/2005 email from a mortgage broker to S&P.

Then there’s this April, 2006 IM chat between two employees (S&P: We Knew Nothing... 2008):

“Rahul: btw – that deal is ridiculous

Shannon: i know right .. model def does not capture half of the ris[k]

Rahul: we should not be rating it

Shannon: we rate every deal

Shannon: it could be structured by cows and we would rate it

Rahul: but there’s a lot of risk associated with it – I personally don’t feel comfy signing off...”

Source* Levin, Coburn 2010

Appendix 5. "Subtitle C—Improvements to the Regulation of Credit Rating Agencies

Sec. 931. Findings

Sec. 932. Enhanced regulation, accountability, and transparency of nationally recognized statistical rating organizations.

Sec. 933. State of mind in private actions.

Sec. 934. Referring tips to law enforcement or regulatory authorities.

Sec. 935. Consideration of information from sources other than the issuer in rating decisions.

Sec. 936. Qualification standards for credit rating analysts. Sec. 937. Timing of regulations.

Sec. 938. Universal ratings symbols.

Sec. 939. Removal of statutory references to credit ratings.

Sec. 939A. Sec. 939B. Sec. 939C.

Sec. 939D. Sec. 939E.

- Review of reliance on ratings.
- Elimination of exemption from fair disclosure rule.
- Securities and Exchange Commission study on strengthening credit rating agency independence.
- Government Accountability Office study on alternative business models.
Government Accountability Office study on the creation of an independent professional analyst organization.

Sec. 939F. Study and rulemaking on assigned credit ratings. Sec. 939G. Effect of Rule 436(g).

Sec. 939H. Sense of Congress. "

Appendix 6. Table of the efforts over the last 10 years made by the EU to address the credit rating agencies

27/07/2004- Call to the Committee of European Securities Regulators. (CESR) for Technical Advice on possible measures concerning Credit Rating Agencies

09/01/2006- The Commission has adopted a Communication on 23 December 2005 setting out its approach on credit rating agencies

10/01/2007- Commission welcomes EU regulators' report on credit rating agencies

04/06/2008- The Role of Credit Rating Agencies

02/07/2008- CESR's Second Report to the European Commission on the compliance of credit rating agencies with the IOSCO Code and the Role of credit rating agencies in Structured Finance

31/07/2008- Consultation on policy proposals regarding credit rating agencies

12/11/2008- **Commission adopts proposal to regulate credit rating agencies.**

12/06/2009- The Commission asks for advice on equivalence of different regulatory frameworks

02/06/2010- Commission adopts proposals to amend regulation of European Parliament on CRAs

05/11/2010- Consultation on CRAs, new initiatives

06/07/2011- roundtable on CRAs

15/11/2011- Commission adopts new proposals on CRAs

30/05/2012- **publication of the first regulatory technical standards on CRAs**

16/01/2013- **new rules on and how and when CRAs may rate sovereign debt. also, enable private investors to sue CRAs for negligence**

Source* European Commission website, Rating Agencies.

Appendix 7. Resume David P. Jacob (Executive Managing DirectorS&P)

DAVID P. JACOB

85 Beach Road, Great Neck NY 11023

phone: (516) 466-4107, cell: (516) 428-7945, e-mail: dpjacob@aol.com

Highlights

- Senior capital markets executive with proven expertise in complex securities
- Strong quantitative background with deep knowledge of fixed income securities & derivatives
- Proven management, organizational, leadership, and analytic abilities
- Recognized expert in risk analysis and securitization
- Accomplished author and public speaker

Professional Experience

Standard & Poor's LLC, New York, NY

August 2008 –February 2012

Executive Managing Director

Responsible for one of the company's main business lines—rating global structured finance securities

Managed a global 500+ employee division, generating over \$300 million annual revenues with analysts in the USA, Europe, Asia, and Australia

As a member of ratings leadership group participated in key strategic decisions involving product design, regulatory matters, investor messaging, the "issuer-pay" business model, and other conflicts of interest

Managed the overhaul of the structured finance rating business following the 2007-2008 financial crisis

Represented Standard & Poor's as a member of the Board of Directors of the American Securitization Forum

Substantially reduced the direct expenses of the division

Keynote speaker at major industry conferences

Adelson & Jacob Consulting, LLC, Founding Member

August 2007 - May 2008

securitization and real estate consulting including (i) investment consulting, (ii) strategic consulting, and (iii) expert witness testimony

customers included hedge funds, financial institutions, governmental agencies, institutional investors, and law firms

Nomura Securities International, New York, NY

June 1993 - July 2007

Managing Director- Fixed Income

Firmly established Nomura's Fixed Income Research (at low cost) –twice first place winner on the Institutional Investor All American Research Team

Managed RMBS and CMBS structuring from June 1993-January 2002

Published award-winning research papers

Founding member of Nomura's Commercial Mortgage Securitization effort

Created some of the most innovative structures in CMBS

Member of the fixed income mgt. committee and the loan credit committee

Managed the fixed income analytics group

JP Morgan, New York, NY

April 1989 - June 1993

Managing Director – Co-head of MBS trading desk (1992-1993)

Co-headed team of 10 traders responsible for trading and structuring MBS

Stabilized trading desk after major losses

Managing Director – Head of US Fixed Income Research (1990-1991)

Managed team of 25 analysts

Developed option-adjusted spread methodology for JPM

Trained staff to be highly self-sufficient

Vice President – Head of MBS Research (1989-1990)

Morgan Stanley, New York, NY

June 1983 - April 1989

Vice President (June 1986 to April 1989)

MBS trading—traded arbitrage in IOs, POs and premium coupons

Fixed income quantitative analyst—developed model to value callable and puttable corporate bonds

Developed model to price bonds and liabilities with interest-sensitive cash flows

Developed strategy for hedging high yield bonds

Consulted with insurance companies on pricing and hedging insurance liabilities with embedded options

Moody's Investors Service, New York, NY

June 1982 - June 1983

Senior credit analyst--Covered telephone and cable companies. One of four analysts to re-rate the Bell system following the court-ordered break-up

Equitable Life Assurance, New York, NY,

January 1980 - June 1982

Fixed income quantitative analyst

Developed a dynamic asset-liability investment matching model for many life and annuity products.

Education & certifications

New York University, MBA (finance). With distinction, February 1980 (several years in PhD program in quantitative analysis)

New York University, MS (mathematics). October 1977

Queens College, BA , (mathematics), summa cum laude, January 1976

Passed Series 3, 7, 16, & 24 exams

KOKKUVÕTE

REITINGUAGENTUURIDE REGULATSIOONIDE EFEKTIIVSUS

Merit Leib

Antud magistritöös on analüüsitud regulatsioonide/määruste ja juhendite efektiivsust, mis on vastu võetud enam kui 10 aastat tagasi kontrollimaks reitinguagentuure. Vaatamata korduvatele läbikukkumistele ja eksimustele, mis toime pandud reitinguagentuuride poolt, jäävad nad endiselt oluliseks osaks fikseeritud tulumääraga kapitaliturgudel. Emitendil on võimatu müüa võlga/ kohustusi suures mahus ilma krediidireitinguta. Investorid ja regulaatorid jätkavad reitingute kasutamist kui investeeringute kriteeriumitena ning riski mõõtmiseks. Kui vead on tingitud puuduliku analüüsi- või seetõttu, et reitinguagentuurid püüavad rahuldada oma kliendi soove, tekitavad reitingud seeläbi tohutu riski kapitaliturgudel. Paljud nõustuvad, et reitinguagentuurid olid peamisteks põhjustajateks viimase finantskriisi tekkel.

Praegune reitinguagentuuride raamistik on tulvil huvide konflikte. Emitendi jaoks tähendab kõrgema reitingu määramine odavamat kapitali. See omakorda tekitab suuremat stiimulit survestada reitinguagentuure, et saada kõrgemat reitingut emitendi võlale/ kohustusele. Reitinguagentuurid on eraettevõtted, mille eesmärgiks on pikaajaline kasumi maksimeerimine oma aktsionäridele. Nad tegutsevad oligopoolsel turul, kus domineerivad kolm ettevõtet (S&P, Moody's ja Fitch). Väljastamaks krediidireitinguid, on reitinguagentuurid emitentide poolt selleks palgatud ja tasustatud. Reitinguagentuurid on üksteise konkurentideks, kuna soovitakse olla emitentide poolt palgatud reitimaks nende võlga/ tehinguid. Tulemuseks on see, et reitinguagentuurid soovivad igal võimalusel teha oma kliendid õnnelikuks, väljastades kõrgeid reitinguid. Kuigi krediidireitingud põhinevad

analüüsil ja mudelitel, mis välja töötatud reitinguagentuuride poolt, siis nõrgestatakse just neidsamu standardeid määrates täispuhutud reitinguid.

Finantsinstitutsioonide regulaatorid on nõ üle andnud oma riskid, kasutades allhankena reitinguagentuure, kes määravad reitinguid kui riski mõõdikutena ning andes neile sellega üksiti tohutu võimu ja tähtsust. Kuni viimaste muudatusteni olid krediidireitingud põimitud valitsuse määrustesse, mis olid seotud pankade ja kindlustusseltside kapitali adekvaatsusega. Kuna pangad ja kindlustusseltsid on suurimad võla ostjad, tuleneb riigi ja finantsasutuste süsteemne risk täispuhutud reitingutest, mis on ohtlik üldisele riigi finantsseisundile.

Krediidireitingud võivad mõjutada ka riigivõlga. Paljud usuvad, et alandades riigi reitingut, aitavad reitinguagentuurid sellega kaasa valitsuse nõrgestamisele. Probleem reitingute protsüklilisusega jääb üheks keerulisemaks väljakutseks turul ning on tõenäoliselt tulevikus uurimist vajav valdkond. Valitsus jättis reitinguagentuurid sisuliselt isereguleerivateks, kuna teooria kohaselt eeldati, et reitinguagentuurid ei soovi oma mainet rikkuda. See aga ei töötanud. Siiski on viimased reitinguagentuuride läbikukkumised viinud valitsusi uuesti otsima viise, kuidas reguleerida reitinguagentuure. Reitinguid väljastatakse nii mitmes riigis ning emiteeritud võlakirju on ostetud investorite poolt ka teistest riikidest, mistõttu on reitinguagentuuride probleem üksiti ülemaailmne finantsturgude probleem. Näiteks ostsid mitmed Euroopa ja Aasia institutsioonid miljardite dollarite väärtuses AAA reitinguga kohustusi/ võlgasid, mis oli välja antud USA's ning millest enamuse hinnati kiiresti alla või muutusid *default* staatusesse.

2004.aasta alguses võeti vastu IOSCO käitumiskoodeks, mis oli suunatud reitinguagentuuridele. Sellele järgnes reitinguagentuuride reform (2006.a.), ESMA poolt koostatud määrused Euroopas ning Dodd-Frank regulatsioonid 2010.aastal. Eelnimetatud regulatsioonide abil on püütud suurendada valitsuse järelvalvet ja reguleeritavust reitinguagentuuride üle.

Mõisteti, et Enroni näite põhjustajaks oli puudulik analüüs, mis põhjustas valesid hinnanguid. Seetõttu keskenduti edaspidistes määrustes pigem huvide konfliktile, mis

põhjustas reitinguagentuuride omavahelise konkureerimise vähendades selleks krediidi standardeid ja eksitati investoreid. IOSCO juhised täpsustavad, et reitinguagentuurid peaksid kehtestama kriteeriumid, mis oleksid sõltumatud ärilistest kaalutlustest. Määrused kohustavad reitinguagentuure dokumenteerima ja avalikustama oma kriteeriume. Reitingud peavad aga olema määratud lähtuvalt kriteeriumidest.

Reitinguagentuuri reform (2006) seadis mõningad standardid saamaks riiklikult tunnustatud reitinguagentuuriks ning SEC'ile anti võim vajadusel neid karistada. Reegel 17g-5 võeti vastu SEC'i poolt, mis konkreetselt oli suunatud reitinguagentuuride huvide konflikti vähendamiseks. Antud reegluga püüti julgustada "pealesunnitud" reitingute väljastamist, et takistada reitingu *shopping*'ut. Lisaks püüdis valitsus sellega julgustada luua rohkem reitinguagentuure, et vähendada nii kolme domineeriva reitinguagentuuri võimu.

Kõige olulisem aspekt, mis seotud reitinguagentuuridega Dodd-Frank Act'is, oli nõue, et reitingute kasutamine eemaldati riiklikest regulatsioonidest. Eesmärk oli vähendada reitinguagentuuride võimu, elimineerides nõuded, et nende reitinguid peab kasutama. Samuti püüti regulatsioonidega suurendada reitinguagentuuride vastutust ja kohusetundlikkust. Märkimisväärne on see, et USA määrustesse ei ole lisatud nõudeid kehtivuse, kvaliteedi või analüüsimudelitele.

Akadeemikud pöörasid suuremat tähelepanu reitinguagentuuridele ja nende probleemidele alles viimase 10-15 aasta jooksul. Enamik teadusuuringute fookuses on olnud huvide konflikt, mis tulenevad "issuer-pay" ärimudelist ning "regulatiivsest litsentsist", mis reitinguagentuuridele anti kunagi valitsuse poolt. Mõneti sobitub reitinguagentuuride sektor "principal- agent" probleemi. See on valdkond oluliste komplikatsioonidega, mil erinevatel *principal*'idel on erinevad eesmärgid. Antud juhul tekitavad erinevad eesmärgid erinevate *principal*'ide poolt ühe agendi puhul huvide konflikti. Peamised *principal*'id reitinguagentuuride turul on emitendid, investorid ja regulaatorid (seadus). Selle tulemusena on seda raskem reitinguagentuuridel väljastada nõuetekohast reitingut kõigile kolmele *principal*'ile. Mõned akadeemikute väljakäidud ideed on regulaatorite poolt vastu

võetud, näiteks reitinguagentuuride vastutuse suurendamine, nende rolli vähendamine määrustes ning suurenenud nõue raporteerimise ja dokumenteerimisele.

Antud magistritöö peamine tähelepanek on, et juhised ja määrused, mis tänase seisuga on vastu võetud, ei ole piisavad vähendamaks reitinguagentuuride halba käitumist (ekslikud reitingud), mis on oluliselt kahjustanud finantsasutuste-, investorite majandustulemusi ning kogu maailma majandust. Oluliseks panuseks antud töös on tuua välja tõendid läbi erinevate kohtuasjade ja jätkuva reitinguagentuuride käitumismaneeri, mil isegi 2013.aastal määrused ei tööta.

Antud töös on esitatud erinevaid tõendeid, näitamaks, et reitinguagentuuridele seatud määrused ja normid ei tööta. Esiteks, ei olnud IOSCO juhendid ega CRA Reform Act (2006) piisavad ennetamiseks 2007.aasta finantskriisi. Teiseks, on reitinguagentuurid suutnud pääseda vastutusest enamikest kohtuasjadest, mis nende vastu on algatatud. Kolmandaks, reitinguagentuurid on jõudnud tagasi punkti, kus nõrgestatakse standardeid turuosa suurendamise eesmärgil. Neljandaks, lõpetas üks reitinguagentuur (S&P) töölepingud tippjuhtidega, kes oli palgatud just selleks, et muuta reitinguagentuuride senist käitumist. Kõige viimaseks tõendiks on käesoleval aastal USA Justiitsministeerium koos 16 osariigi poolt esitatud kohtuasi S&P vastu. Kõige olulisem tähelepanek antud kohtuasja juures on see, et ei tuginetud mitte ühelegi uuele regulatsioonile/ määrusele. Selle asemel kasutati 1989. aastal vastu võetud seadust, kus käsitletakse pankasid ja seda, millist infot neile väljastada. Riiklikud kohtuasjad tuginevad tarbija pettuse määrustele. Üldiselt süüdistatakse kohtuasjades S&P'i pankade ja investorite eksitamises, väites, et nad ei arvesta reitingute määramisel äriliste otsustega. Eelnimetatud faktid näitavad ühemõtteliselt uute regulatsioonide võimetust reitinguagentuure reguleerida. See on kõige selgem tõestus, et määrused, mis oli spetsiaalselt vastu võetud kontrollimaks reitinguagentuure, on ebaõnnestunud.

Wall Street Journal'is avaldati S&P kommentaar eelmainitud kohtuasjast (21 aprill 2013), kus tunnistati, et nende esitlustes/ ütlustes/ reitingutes välja öeldud sõltumatus kriteeriumidest oli vaid üles puhutud (reklaami eesmärgil) ega olnud kunagi mõeldud võtta

kui puhta kullana (investorid). Sellega on S&P sisuliselt välja öelnud seda, et nad pole kunagi IOSCO juhendeid järginud. On selge, et ka kõige uuemate õigusaktide kehtivuse aja jooksul lasevad reitinguagentuurid end mõjutada ärilistel kaalutlustel nende valikut analüütiliste kriteeriumide suhtes koostamaks reitinguid.

Antud magistritöö viimases osas esitab autor analüüsi, arutelu võimalikeks lahendusteks ning ettepanekud/ plaani parendamiseks praegust raamistikku. Töö autori poolt esitatud innovaatiliseks ideeks on võidelda reitingu shoppingu vastu. Nimetatud ettepanekus soovitatakse, et valitsus valib juhusliku valiku alusel tehinguid, mil emitent on eelnevalt keeldunud kasutamast teatud reitinguagentuuri ja nõuda seejärel, et reitinguagentuur hindaks valitud tehingut. Sel juhul saaks avalikkus kasu saadavalolevast informatsioonist ja emitendid ei saa enam investoreid selle varjamisega petta kasutades reitinguagentuuride madalaid standardeid. Teisalt, ei peaks reitinguagentuurid enam vältima tehinguid, mil kardetakse solvata potentsiaalset klienti (emitent).

Lisaks soovitab autor suurendada karistusi ja vastutust rikkumise eest ning suunata neid mitte ainult reitinguagentuuride vastu, kuid ka tippjuhtide meeskonna vastu (isikuline lahenemine). On tõenäoline, et hirmuga isikliku vastutuse ees oleks paremad töötulemused: parem kaitumine ja vastavus seadustega.

Autori soovitatud plaan parendada reitinguagentuuride järelvalvet ja tulemuslikkust:

- a. Hoida põhielemendid praeguses raamistikus
 - i. Erasektori reitinguagentuurid
 - ii. “*Issuer-pay*”, kuid muudetud sellega, et investorid valivad reitinguagentuuri
 - iii. Valitsus reguleerib
- b. Valitsus peaks üle vaatama, testima ja kinnitama reitingu kriteeriumid
- c. Valitsus peaks looma standardid igale tasemele/ kategooriale
- d. Valitsus peaks loobuma eesmärgist loomaks rohkem NRSRO'sid
- e. Valitsus peaks juhusliku valiku tulemusel volitama mitte- NRSRO'sid reitima tehinguid.

- f. Suurendada karistusi rikkumiste eest ja isikuliselt juhtivtöötajate karistamine
- g. Vähendada liigset tuginemist reitinguagentuuridele, nõudes, et finantsinstitutsioonid teeksid ise vajalikud analüüsid ja riski hinnangud.
- h. Anda emitentidele seaduslik alus survestada reitinguagentuure.

On üsna selge, et peab tegema rohkem tööd mõistmaks, miks määrused jätkuvalt ebaõnnestuvad ega tööta. Samuti on oluline mõista emitentide ja investorite dünaamikat, kuidas kumbki kasutab reitinguagentuuri. Jäänud on veel lahti seletamata, kas sisemist huvide konflikti on võimalik hallata *issuer-pay* mudelis. Seda ei tea aga enne järgmist finantskriisi, kas reitinguagentuuride probleem on lahendatud lõpuks tänaste kehtivate regulatsioonide/ määrustega.

Kokkuvõtteks võib öelda, et reitinguagentuurid, määrares kehvasti esitletud (üles paisutatud) AAA, AA ja A reitinguid triljonite dollarite väärtuses *securities*, oli oluline jõud 2007.a. finantskriisi põhjustamisel. Ilma nendeta poleks finantskriisi esinenud. Regulaatorid andsid neile võimu ning avalikkus maksis hinda. Omaks võtmata enda süüd, otsustas valitsus valitseda reitinguagentuuride võimu, mida nad reguleerivad. Esialgne pingutus, mil reitinguagentuurid oleksid pidanud ise-reguleerima, ebaõnnestus. Seetõttu loodi reitinguagentuuride reform (2006). Mõned ideed väljendatakse eelnimetatud reformis ja IOSCO käitumiskodeksis, mis olid head, kuid mitte piisavalt head, et vältida reitinguagentuuride poolt põhjustatud suurimat finantskriisi, mis on tekkinud pärast Suurt Depressiooni. Veelgi enam, õnnestus reitinguagentuuridel ka pärast viimast finantskriisi hoiduda vastutusest.

Kõige viimane Dodd-Frank Act on lisatud määrustesse, kuid tundub, et uued regulatsioonid võivad siiski jääda puudulikuks, millesse pole lisatud huvide konflikti tuumikut. Kuigi nõuti reitingute eemaldamist seadustest, ei anna selleks eeskirjad alternatiive. Pealegi, nagu viidatud viimasele California kohtuasjale, väidab valitsus, et jätkub halb käitumine krediidi-reitingute moonutamises ja *rating shopping*.

Uued määrused on suuresti keskendunud protsessidele ja protseduuridele, kuidas saada NRSRO'ks, dokumentide analüüsimisele, vastutuse suurendamine jne. Siiski pole mainitud

põhiküsimust- kvaliteetne analüüs. Samuti pole muudetud reitingu *shopping/ catering*'i ebaseaduslikuks. Suur hulk probleeme ja nõudeid jäävad endiselt alles.

Reitingul võib olla oluline funktsioon. Neid kasutatakse jätkuvalt edasi, isegi kui Dodd-Frank Act'iga võeti nad määrustest välja. Seega pole antud juhul alternatiivi, ent lahenduseks oleks parandada regulatsioone ning vastavust. Luues juurde rohkem reitinguagentuure, ei paista samuti olevat lahenduseks. Stiimulit, ajades taga suuremat turuosa vähendades selleks standardeid, tuleb minimiseerida. Määrus peaks nõudma selget ja võrreldavat reitingut. Tuleks luua ranged karistused mittevastavuse korral. Kuigi see oleks hea, kui reitinguagentuurid võistleksid omavahel kvaliteedi, määruste ja vastutuse eest. Siiski ei ole nende praegune raamistik piisav.

Lihtlitsents lõputöö reprodutseerimiseks ja lõputöö üldsusele kättesaadavaks tegemiseks

Mina, Merit Leib (sünnikuupäev: 18.02.1985)

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